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AUTHOR INDEX, 1980

Abate, Lorenzo, 628–31
Abraham, Michael H., 854–9, 1033–6
Acheson, R. Morrin, 326–9
Adeleke, Bbatunde B., 225–8
Adembri, Giorgio, 1339–43
Ahmad, Iftikhar, 1683–5
Ajo, David, 483–5
Akagi, Kazuo, 1652–8
Akasaka, Takeshi, 432–40
Akhter, Lalarukh, 919–24
Albano, Christer, 1447–51
Alberghina, Gaetano, 1153–5, 1721–4
Albinati, Alberto, 523–9
Albini, Angelo, 1159–61
Albrand, Jean Pierre, 176–80
Alcock, Nathaniel W., 8–12, 1093–5, 1186–90
Alexander, Robert S., 110–12
Allegra, Giuseppe, 523–9
Amato, Maria Emanuela, 1721–4
Ambroz, Hanna B., 768–72
Amorese, Antonio, 239–42
Ananthakrishnanadar, P., 749–51
Ancian, Bernard, 1399–402
Andonian–Haftvan, Jenik, 1033–6
Andreetti, Giovanni Dario, 339–46, 421–6, 786–91
Andrews, Adrian F., 96–102
Angiolini, Luigi, 1745–51
Ankner, Kjell, 1391–5
Aoyama, Yasuhiro, 1665–71
Appleton, David C., 77–82, 87–90, 385–90
Archer, William J., 1828–31
Arumugam, Nateson, 170–5
Asmus, Klaus Dieter, 146–53, 296–9, 758–62
Atherton, Neil M., 1788–91
Atkins, Paul J., 1460–6
Atobe, Hisao, 561–8
Attiga, Salem A., 1271–5
Audsley, Adrian J., 557–60
Ayres, Barry E., 1176–82
Baban, Jehan A., 876–82
Bahnemann, Detlef, 296–9
Baine, Peter, 500–3
Baker, Richard H., 1162–5
Baker, Victor J., 91–5, 1733–8, 1739–45, 1746–51
Bakos, Dusan, 1457–9
Baldry, Peter J., 805–8, 809–15
Banerji, Kalyan K., 676–8
Banks, R. Margaret, 427–31
Barbaro, Gaetano, 1051–6
Barbucci, Rolando, 900–3
Barili, Pier Luigi, 816–18
Barker, Philip J., 941–8, 1488–96
Barone, Vincenzo, 900–3
Barzaghi, Mario, 1617–21
Battye, Peter J., 741–8
Beckwith, Athelstan L. J., 1083–92, 1473–82
Begley, Michael J., 412–20, 704–9
Begtrup, Mikael, 544–9
Behrens, Guenter, 883–9
Bellobeno, Ignazio R., 937–40
Benassi, Rois, 786–91
Benedetti, Ettore, 500–3
Benkovic, Patricia A., 373–9
Benkovic, Stephen J., 373–9
Bennett, John E., 981–4
Bensaude, Olivier, 620–3
Benschop, Hendrik P., 198–205
Ben Taarit, Younes, 1385–90
Bentley, T. William, 1244–52
Berg, Ulf, 949–56, 1350–5
Bernardi, Fernando, 467–70
Berti, Corrado, 339–46, 710–13
Bettinetti, Gian Franco, 1159–61
Bhatty, Mahammad K., 1683–5
Bigley, David B., 553–6
Birdsall, Nigel J. M., 1415–18
Blackborow, John R., 632–6
Blackhall, Alexander, 773–7
Bocelli, Gabriele, 339–46, 421–6, 786–91
Boicelli, C. Adrei, 176–80
Bongini, Alessandro, 1262–70
Bonifacic, Marija, 758–62
Booth, Harold, 255–9
Bose, Ajay K., 1573–7
Bothe, Eberhard, 883–9
Bottoni, Andrea, 467–70
Bovill, Moira J., 1529–43
Bowen, Christine T., 1244–52
Bowen, Richard D., 1219–27, 1411–14
Bowman, W. Russ, 731–6
Bradbury, J. Howard, 693–9
Brady, Kieran, 121–6, 535–40, 867–75
Brambilla, Raymond, 1847–9
Bregman, Rob, 33–8
Bridgewater, Alan J., 1006–16
Brito–Palma, Fernando M. S., 91–5, 1739–45, 1746–51
Brocklehurst, Brian, 87–90
Brooke, David N., 1850–3
Broomhead, Eleanor J., 796–804
Brown, Douglas H., 993–8
Brown, Richard T., 919–24
Bruce, J. Malcolm, 860–6
Brueckner, Sergio, 523–9
Bruhin, Juerg, 1045–50
Brunskill, John S. A., 4–7
Brunton, George, 981–4
Brydon, Donald L., 773–7
Buccheri, Francesco, 1627–30
Buckley, Eric, 132–8
Bull, David C., 77–82, 385–90
Buncel, Erwin, 165–9
Bunton, Clifford A., 1520–8, 1859–67
Burden, Alan G., 1212–18
Busby, Reginald E., 890–9
Bushby, Richard J., 1419–20
Butler, Anthony R., 103–5, 106–9, 110–12, 113–16, 229–31 232–4
Calegao, Isabel C. C., 453–6
Calvino, Rosella, 1096–8
Camalli, Mercedes, 1733–8
Capasso, Sante, 1297–300
Capobianco, Giulio, 1277–81
Capon, Brian, 300–5
Capozzi, Giuseppe, 68–73
Carlsen, Lars, 188–90, 1080–2, 1206–11, 1557–62, 1768–73
Carnovale, F., 957–60
Carrasco, Nelson, 1520–8, 1859–67
Caruana, Genevieve, 976–80
Casiraghi, Giovanni, 407–11
Casnati, Giuseppe, 407–11
Cassidei, Luigi, 1642–6
Castoldi, Aldo, 562–7
Cerfontain, Hans, 13–18, 19–22, 23–7, 28–32, 33–8, 358–62, 592–7, 838–41, 904–10, 911–14 1057–62
Chadwick, Derek J., 737–40, 1529–43
Chaloner, Penny A., 1028–32
Chambers, Richard D., 778–80
Chan, Tze–Lock, 672–5
Chandler, Anne, 1318–25
Chapman, Bogdan E., 693–9
Chapman, Norman B., 1212–18
Charlton, Peter A., 176–80
Chatgilialoglu, Chrysosstomos, 1141–50
Chatgilialoglu, Chryssostomos, 1429–36
Cheer, Clair J., 1805–8
Cheetham, Anthony K., 471–5
Chiang, Yvonne, 1832–9
Chimichi, Stefano, 1339–43
Chodak, Ivan, 1457–9
Chow, Yuan L., 931–6
Ciliberto, Enrico, 483–5
Cimino, Giuseppe G., 574–8
Clark, Timothy, 1686–9
Clarke, Michael J., 553–6
Clauder, Otto, 701–3
Clerici, Angelo, 1234–7
Cliffe, Ian A., 737–40
Clifford, David P., 632–6
Cline, Barry L., 1586–91
Close, Deborah, 778–80
Cogolli, Pietro, 1331–5, 1336–8
Consiglio, Giovanni, 1153–5, 1627–30
Conti, Filippo, 900–3
Convert, Odile, 1262–70
Coombes, Robert G., 1606–16
Cort, Antonella Dalla, 1774–7
Crabb, Trevor A., 1778–82
Crampton, Michael R., 752–7, 1850–3, 1854–8
Cremer, Sheldon E., 1467–72
Cremin, Denis J., 412–20
Critchley, Stephen R., 326–9
Crompton, Malcolm W., 693–9
Cross, Ronald J., 993–8
Cully, Norman, 1859–67
Curci, Ruggero, 457–62
Curry, Michael J., 1391–8
Dabovic, Milan, 1356–65
DaCol, Lino, 68–73
Dalton, John, 370–2
Da Silva, Maria J., 127–31
Datta, Narayandas, 1415–18
Davies, Alwyn G., 819–24, 941–8 1488–96
Davoudzadeh, Faegh, 1520–8
De, Asish, 4–7
Deen, Rudolf, 198–205
Dega–Szafran, Zofia, 1516–19
Delfini, Maurizio, 900–3
Dell'Erba, Carlo, 1764–7
De Maria, Paolo, 1156–8
Derrick, Peter J., 306–12
Dever, J. Robert, 1006–16
Di Blasio, Benedetto, 500–3
Dietrich, Robert F., 1592–5
Di Furia, Fulvio, 457–62
Dignam, Kieran J., 704–9
Di Nunno, Leonardo, 239–42
Di Silvestro, Giuseppe, 1406–10
Dixon, William T., 273–8
Doba, Takahisa, 61–4
Domenico del Rosso, Mauro, 239–42
Dominey, Terence W., 890–9
Dondoni, Alessandro, 717–23, 1051–6
Doucet, Jean Pierre, 1399–402
Douglas, John E., 1592–5
Douglas, Kenneth T., 1037–44
Drakenberg, Torbjoern, 363–9
Drew, Michael G. B., 1622–6
Dubini–Paglia, Ernestina, 937–40
Dubois, Jacques Emile, 620–3
Duerden, Michael F., 330–8
Dutka, Ferenc, 401–6
Duus, Fritz, 1080–2, 1768–73
Edwards, John O., 457–62
Egsgaard, Helge, 1206–11, 1557–62
Eguaven, Osa, 829–31
Eguavoen, Osa, 832–4
El Seoud, Omar A., 127–31
Elvidge, John A., 447–51
Emokpae, Thomas A., 829–31, 832–4
Emsley, James W., 816–18
Encinas, M. Victoria, 724–30
Encinas, Maria V., 56–60
Epstein, Arthur J., 1578–85
Everard, John E., 132–8
Everett, Jeremy R., 255–9
Ewing, David F., 4–7
Exner, Otto, 1051–6
Fagerness, Paul E., 1586–91
Farina, Mario, 1406–10
Farnia, Giuseppe, 1277–81
Farooqi, Jameel A., 835–7
Farrar, Charles R., 181–7
Fastrez, Jacques, 1067–74
Favini, Giorgio, 849–53
Feeney, James, 176–80, 1262–70
Ferguson, George, 74–6, 867–75 1170–5, 1176–82, 1183–5
Ferguson, Ian J., 1746–51
Ferina, Mario, 523–9
Ferris, Michael J., 326–9
Ferruti, Paolo, 900–3
Fetter, Clive L., 553–6
Fiandanese, Vito, 1642–6
Fini, Adamo, 1156–8
Fischer, Ernst, 1659–64
Fischer, Nikolaus H., 1425–8
Fischer, Peter, 781–5
Fisichella, Salvatore, 1153–5, 1721–4
Florio, Saverio, 239–42
Forlani, Luciano, 313–16, 1156–8
Foxall, James, 273–8
Fragala, Ignazio, 483–5
Frank, Judit, 401–6
Franz, K. D., 957–60
Fringuelli, Francesco, 971–5
Fronczek, Frank R., 1425–8
Fujiwara, Hideji, 1573–7
Fukuyama, Keiichi, 1701–3

Fung, Chung W., 267–72
Furukawa, Naomichi, 432–40
Galliani, Guido, 1–3
Gallo, Roger, 1350–5
Gamba, Aldo, 493–9, 1617–21
Gambaro, Alessandro, 1277–81
Gan, T. H., 957–60
Gasic, Miroslav J., 1356–65
Geenevasen, Jan A. J., 1057–62
Gensmantel, Nigel P., 1725–32
George, Manapurathu V., 724–30
Gerson, Fabian, 1045–50
Gesztes, Kamilla, 701–3
Gibson, Brenda, 752–7
Gibson, Ernest P., 1288–92, 1696–700
Gilbert, Bruce C., 191–7, 273–8, 647–56, 1141–50, 1429–36, 1821–7
Giles, Jeremy R. M., 1497–504
Gill, Barbara, 1141–50
Giuffre, Luigi, 662–7
Givens, Richard S., 77–82
Gladiali, Serafino, 598–602
Godfrey, Martin, 330–8
Gold, Victor, 243–9, 1421–4
Golding, Bernard T., 731–6, 961–70
Goodman, Paul D., 1093–5
Gooijer, Cees, 1647–51
Gore, Peter H., 835–7, 1828–31
Gosney, Alan P., 1783–7
Goto, Seizi, 1678–82
Gottarelli, Giovanni, 598–602
Grand, Andre, 792–5
Granozzi, Gaetano, 483–5
Greci, Lucedio, 339–46, 421–6, 710–13, 786–91
Greenhough, Trevor J., 8–12
Grieve, Duncan McL. A., 300–5
Grossel, Martin C., 471–5
Grossi, Loris, 1063–6, 1761–3
Guanti, Giuseppe, 1764–7
Guerra, Maurizio, 52–5
Guillerez, Jean, 620–3
Guimon, Claude, 91–5
Guler, Faruk, 1752–6
Hadjigeorgiou, Panicos, 1606–16
Hakushi, Tadao, 1678–82
Hall, C. Dennis, 1460–6
Hallett, Geoffrey, 624–7, 1372–5
Hamilton, Kenneth, 1544–8
Hardy, Andrew D. U., 999–1005
Harger, Martin J. P., 154–60, 1505–11
Harlow, Richard L., 1166–9
Harris, Robin K., 476–82
Hasegawa, Akinori, 1690–5
Haszeldine, Robert N., 1162–5
Hawari, Jalal A. A., 1488–96
Hayashi, Michiro, 1690–5
Hayashi, Shuichi, 763–7
Heatley, Frank, 860–6, 919–24
Hegarty, Anthony F., 121–6, 412–20, 535–40, 579–91, 704–9 867–75, 1238–43, 1313–17, 1318–25, 1326–30
Herbert, Judith A., 1253–8
Herold, Bernardo J., 1788–91
Hirano, Masao, 569–73
Hirst, David M., 8–12
Hirst, Jack, 829–31, 832–4
Hollinshead, Ira M., 632–6
Holmes, Timothy J., 1578–85
Holton, Dolores M., 1757–9
Horne, William, 1467–72
Hunter, Geoffrey, 1105–10
Hunter, John A., 1544–8
Hursthouse, Michael B., 117–20
Hussain, Ishtiaq, 106–9, 229–31, 232–4
Hutton, Alan T., 139–45
Ihara, Yasuji, 1483–7
Ihsan, Ekmel M., 741–8
Illuminati, Gabriello, 1774–7
Ingold, Keith U., 1366–71
Inoue, Takeshi, 842–8
Inoue, Yoshihisa, 1672–7, 1678–82
Irving, Harry M. N. H., 139–45
Isaksson, Roland, 1815–21
Itoh, Masami, 603–9
Iwai, Kiyoshi, 931–6
Iwamoto, Kiyoshi, 1809–15
Izawa, Yasuji, 603–9, 1017–21, 1636–41
Jackson, Richard A., 1452–6
Jaenicke, Walther, 1601–5
James, Daniel, 471–5
Jameson, Reginald F., 1105–10
Jamieson, Campbell, 1366–71
Janata, Eberhard, 146–53
Jennings, W. Brian, 949–56, 1512–15
Johal, Shivraj S., 165–9
Jones, John R., 441–6, 447–51
Jones, Richard A., 117–20
Jost, Roland, 363–9
Juranic, Ivan, 1356–65
Kaberia, Festus, 1622–6
Kamijo, Nagao, 763–7
Kamminga, Dik A., 1647–51
Kamounah, Fadhil S., 1828–31
Kannan, N., 749–51
Karim, Amna, 1683–5
Karton, Yishai, 250–4
Kato, Yoshio, 1017–21
Katritzky, Alan R., 91–5, 279–85 1733–8, 1739–45, 1746–51
Katsube, Yukiteru, 1701–3
Kawaguchi, Kenji, 1714–20
Kawazu, Kazuyoshi, 1701–3
Kaye, Perry T., 1631–5
Kazarians–Moghaddam, Hira, 273–8
Kemp, Terence J., 8–12, 291–5, 768–72, 1093–5, 1708–13
Kenyon, George L., 1592–5
Khaled, Md. Abu, 206–11
Khaled, Mohammad Abu, 1119–30
Khalil–Ur–Rahman, 832–4
Khan, Masood A., 1183–5
Khorramdel–Vahed, Mehdi, 267–72
Kida, Masaaki, 1665–71
King, David M., 1821–7
Kiss, Tamas, 1105–10
Kitajima, Nobumasa, 1201–5
Kitamura, Emi, 569–73
Kitao, Teijiro, 1569–72
Klaebe, Alain, 976–80
Klatte, Gerd, 1350–5
Klein, Wolf Ruediger, 1557–62
Klimash, June W., 1425–8
Knox, Trevor McO., 1686–9
Kobayashi, Katsuhisa, 1652–8
Kodama, Yoshio, 1306–12
Koeberg–Telder, Ankie, 358–62
Kollman, Peter A., 1592–5
Koltzenburg, Guenther, 883–9
Komaki, Ryoichi, 561–8
Komives, Tamas, 401–6
Konings, Cornelis A. G., 198–205
Kost, Daniel, 317–25
Kreglewski, Marek, 1516–19
Kremer, Paul W., 1467–72
Kresge, A. Jerry, 1832–9, 1840–6
Krygowski, Tadeusz M., 1563–8
Kunitomi, Yoko, 1672–7
Kuramoto, Nobuhiro, 1569–72
Kusano, Yumiko, 1111–15
Kushi, Yoshihiko, 763–7
Kuthalingam, Packian, 170–5
Labaziewicz, Henryk, 550–2
Laleh, Ahmed, 610–15
Lamm, Bo, 1301–5
Lammertsma, Koop, 28–32
Landini, Dario, 46–51
Lazarus, Robert A., 373–9
Lee, John D., 1075–9
Lee, Jung–Si, 1578–85
Legler, Gunter, 1376–83
Leitch, Elizabeth, 103–5, 106–9
Leonardi, Cristina, 937–40
Liler, Milica, 380–4
Liljefors, Tommy, 1815–21
Lillis, Veronica, 77–82, 83–6
Littler, John S., 557–60, 657–61
Lloyd, Douglas, 74–6, 668–71, 1441–6
Lodge, Bruce A., 1170–5
Loia, M. Candida B., 1788–91
Longo, Maria Luisa, 628–31
Lorenc, Ljubinka, 1356–65
Loudon, Alexander G., 306–12
Lucchini, Vittorio, 68–73
Luk, Kin Shing, 1166–9
Lunazzi, Lododvico, 1761–3
Lunazzi, Lodovico, 52–5, 717–23 1063–6, 1704–7
Macaulay, Ernest W., 1170–5
Maccarone, Emanuele, 161–4, 628–31
McCarthy, Daniel G., 579–91
Macciantelli, Dante, 717–23, 1051–6, 1704–7
McCormack, Margaret T., 867–75, 1318–25
McKenna, James, 77–82, 83–6, 87–90, 385–90
McKenna, Jean M., 77–82, 83–6 87–90, 385–90
McKeown, Robert H., 504–14, 515–22
McKervey, M. Anthony, 1683–5 1686–9
Mackie, Raymond K., 96–102
Mackle, Henry, 1686–9
McLauchlan, Keith A., 796–804
MacNicol, David D., 993–8, 999–1005
Macrae, Robert, 1631–5
McVie, James, 286–90
Maeda, Koko, 1282–7
Magagnoli, Claudio, 1704–7
Maia, Angelamaria, 46–51
Maiolo, Filippo, 1331–5
Majoral, Jean Pierre, 792–5
Mak, Thomas C. W., 672–5
Malik, K. M. Abdul, 117–20
Mallinson, Paul R., 993–8
Malone, John F., 1683–5
Mamo, Antonino, 161–4
Manabe, Osamu, 1111–15
Mancini, Vittorio, 463–6
Mandolini, Luigi, 1774–7
Manglik, Ajay K., 1606–16
Manhas, Maghar S., 1573–7
Mannucci, Carlo, 1339–43
Marcandalli, Bruno, 937–40
Marchese, Giuseppe, 1642–6
Marchetti, Leonardo, 421–6, 786–91
Maros, Laszlo, 39–45
Marriott, Paul R., 191–7
Marsh, Wayne C., 74–6
Marshall, Donald R., 74–6
Martins, Luis J. A., 1708–13
Marton, Attila F., 401–6
Marziano, Nunziata C., 574–8
Masci, Bernardo, 1774–7
Maskill, H., 427–31
Masui, Masaichiro, 347–57, 1022–7
Matsumoto, Akiteru, 347–57
Matsuo, Akihiko, 763–7
Mattia, Carlo Andrea, 1297–300
Mazhur–ul–Haque, 1467–72
Mazur, Yehuda, 1659–64
Mazurek, Aleksander P., 1293–6
Mazzarella, Lelio, 1297–300
Meakins, G. Denis, 1631–5
Membrey, Francois, 1399–402
Meszaros, Zoltan, 401–6
Metzger, Jacques, 1350–5
Mhatre, Sushila, 260–6
Midgley, John M., 1170–5, 1176–82
Mihailovic, Mihailo L., 1356–65
Mihalov, Vincent, 1457–9
Milani, Gianni, 421–6
Milczarek, Elizbieta, 1563–8
Milgrom, Lionel R., 370–2
Mills, Derick J., 637–40
Minoli, Giovanna, 1159–61
Miri, Adhid Y., 243–9
Mitchell, Alastair D., 286–90
Mitchell, Robert C., 915–18
Miura, Masazumi, 61–4
Mizuta, Toshihiko, 61–4
Moad, Graeme, 1083–92, 1473–82
Modena, Giorgio, 68–73, 457–62
Modro, Tomasz A., 632–6
Mok, K. F., 1186–90
Molnar–Perl, Ibolya, 39–45
Mondal, Panchali, 1415–18
Montanari, Fernando, 46–51
Montoneri, Enzo, 662–7
Moodie, Roy B., 741–8, 1606–16 1752–6
Moore, Peter, 291–5, 1186–90
More O'Ferrall, Rory A., 1832–9 1840–6
Morgan, Roger P., 306–12
Morimoto, Takashi, 569–73
Morishita, Tsuyoshi, 432–40
Morley, John O., 1544–8
Morris, David G., 380–4
Morris, Jeffrey J., 212–19, 220–4 679–84, 685–92, 1131–6
Morris, Kenneth P., 1421–4
Mortimer, Roger J., 1228–33
Most, James T., 1467–72
Moura Ramos, Joaquim J., 854–9
Moxon, Gerald F., 835–7
Mrotzek, Herbert, 1557–62
Mugnoli, Angelo, 1764–7
Mukherjee, Jogeshwar, 676–8
Mullane, Maria, 535–40
Murakami, Yukito, 1665–71, 1809–15
Murphy, David, 1757–9
Muszkat, Karol A., 1282–7
Nair, C. Mohana Kumaran, 1800–4
Nakano, Akio, 1809–15
Nakayama, Mitsuru, 763–7
Nanjappan, Palaniappan, 714–16
Narayana, Sthanam V. L., 1116–18
Nasehzadeh, Asadollah, 854–9

Natarajan, Rajagopalan, 427–31
Navech, Jacques, 792–5
Nesi, Rodolfo, 1339–43
Newsam, John M., 471–5
Nickel, Ulrich, 1601–5
Nishihata, Ken, 1306–12
Nishio, Motohiro, 1306–12
Noda, Shoji, 61–4
Nomura, Okio, 1344–9
Norman, Richard O. C., 273–8, 647–56, 1099–104, 1429–36
Norton, Raymond S., 693–9
Noto, Renato, 1153–5, 1627–30
Novi, Marino, 1764–7
Nozaki, Hiroshi, 763–7
Nyns, Claire, 1441–6
Oae, Shigeru, 432–40
Occhipinti, Salvatore, 1721–4
Ogata, Yoshiro, 616–19
Ohmori, Hidenobu, 347–57
Ohnishi, Ryuichiro, 530–4
Ohya–Nishiguchi, Hiroaki, 1045–50
Okamoto, Kunio, 842–8
Okuno, Hiroshi, 1636–41
Oliva, Cesare, 1617–21
Olivato, Paulo R., 453–6
Ono, Yoshio, 1201–5
Ooi, Ngan Sim, 1792–9
Osborne, David A., 925–30
Osugi, Jiro, 1596–600
Ozaki, Shigeko, 1022–7
Packer, John E., 296–9
Page, Michael I., 212–19, 220–4, 679–84, 685–92, 1131–6, 1725–32, 1783–7
Palling, David J., 1460–6
Palmieri, Paolo, 598–602
Panciera, Giorgio, 52–5
Panzica, Raymond P., 1586–91
Pardini, Vera L., 453–6
Parker, William, 1244–52
Parkes, Helen M., 1137–40
Partington, Peter, 1415–18
Parves, Masood, 1683–5
Parvez, Masood, 1176–82
Passini, Paolo, 463–6
Patel, Geeta, 1403–5
Patel, Ranjan C., 91–5, 279–85
Patterson, Colin H., 1631–5
Pauling, Peter J., 1415–18
Payne, David R., 8–12
Peel, J. B., 957–60
Pellicciari–Di Liddo, Livia, 937–40
Pemberton, Susan M., 370–2
Petiaud, Roger, 1385–90
Pfister–Guillouzo, Genevieve, 91–5
Phillipps, Gordon H., 1176–82
Pickles, Francis J., 1805–8
Pierens, Raymond K., 235–8
Pirisi, Filippo M., 46–51
Pitea, Demetrio, 849–53
Placucci, Giuseppe, 1063–6, 1761–3
Platenburg, Dominique H. J. M. 198–205
Pointer, David J., 1075–9
Poloni, Marino, 339–46, 710–13
Porta, Ombretta, 1234–7
Powell, H. Marcus, 641–6
Preston, Peter N., 1544–8
Proctor, Philip, 1725–32
Pross, Addy, 250–4
Pryce–Jones, Trevor, 476–82
Puar, Mohindar S., 1847–9
Puliti, Raffaella, 1297–300
Quick, Geoffrey R., 291–5, 557–60, 657–61
Ramalingam, Kondareddiar, 714–16
Randall, David, 949–56
Ranson, Richard, 610–15
Ranson, Richard J., 267–72
Reisse, Jacques, 854–9
Reynolds, William F., 985–92
Ridd, John H., 632–6, 637–40
Riddell, Frank G., 550–2
Rindone, Bruno, 1–3
Rittner, Roberto, 453–6
Robert, Jean Bernard, 792–5
Roberts, Brian P., 876–82, 1497–504, 1549–56
Roberts, Paul J., 867–75
Roberts, Roger M. G., 267–72
Robertson, J. Monteath, 1170–5
Robinson, Peter J., 1162–5
Robinson, Stephen R., 243–9
Rochester, Colin H., 1271–5
Roe, Jonathan C., 796–804
Roof, Antonius A. M., 838–41
Ryles, Roderick G., 860–6
Saad, Esmat F., 835–7
Saba, Antonio, 1617–21
Sagar, Anthony J. G., 773–7
Said, Zainuddin, 1437–40
Sakuma, Shigeharu, 1201–5
Sakurai, Hiroshi, 1672–7, 1678–82
Salih, Rawa, 447–51
Sammes, Michael P., 1166–9
Samori, Bruno, 598–602
Sanchez, Michel, 976–80
Sandman, Daniel J., 1578–85
Sandstroem, Jan, 949–56
Santini, Sergio, 463–6
Sartori, Giovanni, 407–11
Sasaki, Muneo, 1596–600
Satchell, Derek P. N., 1191–200
Satchell, Rosemary S., 1403–5
Sato, Takeo, 561–8
Satyamurthy, Nagichetti, 714–16
Scaiano, Juan C., 56–60, 724–30
Schaumann, Ernst, 1206–11, 1557–62
Schenetti, Maria Luisa, 421–6
Schissel, Eniko, 39–45
Schofield, Kenneth, 1606–16
Schulte–Frohlinde, Dietrich, 883–9
Sciacovelli, Oronzo, 1642–6
Sciotto, Domenico, 161–4
Scott, Alan C., 260–6
Scotton, Mirella, 1339–43
Scrivens, James H., 860–6
Segre, Anna Laura, 900–3
Selby, Keith, 65–7
Sell, Charles S., 961–70
Sellars, Philip J., 961–70
Senogles, Ernest, 825–8
Serafino, Anna, 1096–8
Serena, Bernardino, 971–5
Severin, Maria Gabriella, 1277–81
Sexton, Michael D., 1006–16, 1141–50
Sgarabotto, Paolo, 339–46, 421–6, 786–91
Shandala, Mowafak, 447–51
Sharafi–Ozeri, Shoshana, 1282–7
Shepherd, Peter T., 113–16
Shinkai, Seiji, 1111–15
Shorter, John, 1212–18
Shrivastava, Hari N., 1116–18
Simonetta, Massimo, 493–9
Sinclair, Roy S., 286–90
Sindona, Giovanni, 541–3
Singh, Hari, 1259–61
Singh, Karamjit, 1549–56
Sinnott, Michael L., 1376–83
Smith, David M., 773–7
Smith, Martin J., 83–6
Smolikova, Jorga, 1051–6
Snatzke, Guenther, 701–3
Soeylemez, Turan, 391–4
Sommer, Jean, 363–9
Spagna, Riccardo, 1733–8
Spinelli, Domenico, 1153–5, 1627–30
Spinner, Ernest, 395–400
Spiro, Michael, 1228–33
Sprecher, Milon S., 317–25
Srinivasan, Chockalingam, 170–5
Stevens, Ian D. R., 1391–8
Suffritti, Giuseppe, 493–9
Sugano, Hiroshi, 206–11, 1119–30
Summers, Raymond, 981–4
Sutcliffe, Roger, 819–24
Sutherland, Ian O., 1529–43
Swanson, Stephen, 999–1005
Swinbourne, Fred J., 476–82
Szafran, Miroslaw, 1516–19
Szele, Ivenka, 493–9
Szerdahelyi, Vilmos, 39–45
Taddei, Ferdinando, 421–6, 786–91
Takamuku, Setsuo, 1672–7, 1678–82
Takaoka, Daisuke, 763–7
Takasuka, Mamoru, 486–92
Takata, Shyoji, 1017–21
Takeuchi, Kenichi, 842–8
Tanaka, Ryuichi, 1714–20
Tanaka, Takehide, 1714–20
Tanida, Hiroshi, 486–92
Tassi, Danilo, 717–23
Taticchi, Aldo, 971–5
Taylor, Paul S., 83–6
Taylor, Roger, 781–5, 1828–31
Taylor, Spencer E., 441–6, 447–51
Tedder, John M., 260–6, 1259–61
Teh, Joo Seng, 693–9
Tempesti, Ezio, 662–7
Testaferri, Lorenzo, 1331–5, 1336–8
Thackeray, Stephen, 77–82, 87–90
Thomas, C. Barry, 1099–104, 1821–7
Thomas, Roderick A., 825–8
Thulin, Bengt, 1301–5
Tiecco, Marcello, 1331–5, 1336–8
Tillett, John G., 610–15, 1437–40
Tingoli, Marco, 1331–5, 1336–8
Titus, Donald D., 1578–85
Tobin, Geoffrey D., 1606–16
Todesco, Paolo E., 313–16
Tomioka, Hideo, 603–9, 1017–21 1636–41
Tomizawa, Kohtaro, 616–19
Tonachini, Glauco, 467–70
Tone, Hiroatsu, 1344–9
Torizuka, Koichi, 561–8
Torre, Michele, 161–4, 628–31
Toth, Gabor, 701–3
Townsend, Leroy B., 1586–91
Townson, Michael, 1452–6
Toyne, Kenneth J., 1212–18
Trapane, Tina L., 1119–30
Traverso, Pietro G., 574–8
Trotter, James, 672–5
Truscott, T. George, 286–90
Truter, Mary R., 1253–8
Tse, M. W., 1488–96
Tse, Man–Wing, 941–8
Tsuzuki, Hidaeki, 1596–600
Tuohey, Patrick, 1238–43
Tuohey, Patrick J., 1313–17, 1326–30
Turnbull, James H., 1288–92, 1696–700
Turner, Christopher H., 1778–82
Uccella, Nicola, 541–3
Uchimura, Shunichiro, 1690–5
Urry, Dan W., 206–11, 1119–30
Uzawa, Jun, 1306–12
Vaciago, Alessandro, 1733–8
Valle, Giovanni, 68–73
Van de Griendt, Freek, 13–18, 19–22, 23–7, 358–62, 904–10, 911–14
Van der Veen, James M., 1573–7
Van der Weerdt, Anton J. A., 592–7
Van Noort, Paul C. M., 1057–62
Van Woerden, Hendrik F., 838–41
Veierov, Dan, 1659–64
Velthorst, Nel H., 1647–51
Veltwisch, Dieter, 146–53
Venkatachalam, C. Mahalingam 1119–30
Veracini, Carlo Alberto, 816–18
Vickery, Brian, 1622–6
Viertler, Hans, 453–6
Vijayan, Mamannamana, 1800–4
Vincent, Colin A., 668–71, 1441–6
Visser, Cornelis P., 911–14
Viterbo, Davide, 1096–8
Von Sonntag, Clemens, 391–4
Waddington, David J., 65–7, 925–30
Wakatsuki, Yasuo, 1344–9
Walley, Andrew R., 77–82, 87–90 385–90
Wallwork, Stephen C., 641–6
Walton, David J., 668–71, 1441–6
Walton, John C., 96–102, 260–6, 1259–61, 1366–71
Wan, Jeffrey K. S., 225–8
Waters, David N., 835–7
Watkin, David, 1529–43
Watkin, David J., 326–9
Watkins, Steven F., 1425–8
Watson, Grenville, 1099–104
Watson, William P., 731–6
Watt, C. Ian F., 1244–52
Watts, William E., 1520–8, 1859–67
Weil, Thomas J., 1191–200
Wells, Clifford H. J., 132–8
Wennerstroem, Olof, 1301–5
Whalley, W. Basil, 1170–5, 1176–82, 1183–5
Wileson, Robin L., 296–9
Wilford, John B., 1075–9
Wilkinson, Geoffrey, 117–20
Willey, Gerald R., 1622–6
Williams, Alan J., 235–8
Williams, Andrew, 181–7
Williams, D. Lyn H., 165–9, 624–7, 778–80, 1372–5
Williams, Dudley H., 1411–14
Williams, Gareth H., 273–8
Williams, Ian H., 83–6
Williams, Peter S., 647–56
Wilson, Alan A., 427–31
Wilson, David A., 1792–9

Wilson, Derek R., 999–1005
Wilson, Linda M., 1212–18
Wilson, Penelope M., 1854–8
Withers, Stephen G., 1376–83
Wladislaw, Blanka, 453–6
Wold, Svante, 1447–51
Wolf, Robert, 976–80
Worley, Michael C., 632–6
Worley, S. Davis, 1512–15
Wozniak, Damian, 657–61
Wrona, Piotr K., 1563–8
Yaggi, Norbert F., 1037–44
Yamabe, Tokio, 1652–8
Yamakawa, Shyoji, 603–9
Yamashita, Yukio, 616–19
Yamazaki, Hiroshi, 1344–9
Yemul, Shrishailam S., 701–3
Yoneda, Fumio, 1111–15
Yoshida, Hiroshi, 61–4
Yoshimatsu, Akira, 1809–15
Young, Douglas W., 176–80
Young, Ronald N., 1137–40
Zanafredi, Girolamo T., 407–11
Zeichner, Arie, 317–25
Zheng, Shi Qin, 1714–20
Zollinger, Heinrich, 493–9
Zushi, Shoji, 1306–12

SUBJECT INDEX, 1980

ABSTRACTION
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
Ring-opening of some radicals containing the cyclopropylmethyl system, 1473–82
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α-carbonylcarbene reactions, 1636–41
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational-analysis study, 1821–7

ACETAL
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9

ACETALDEHYDE
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45

ACETAMIDE
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O-$^2H_5$ derivatives, 395–400
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3

ACETATE
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o-benzeno, etheno, epoxy, or epithio functions, 486–92
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Reactions of palladium(II) with organic compounds. Part 5. Effect of reaction conditions upon products of oxidation of α-methylstyrene, 1099–104

ACETIC
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2-hydroxypyridines, 620–3
Keto-enol equilibriums in mixed acetic sulfuric anhydrides, 662–7

ACETOACETYL
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene-mediated (E1cB) path for basic hydrolysis of S-acetoacetylcoenzyme A and analogs, 1037–44

ACETOACETYLCOENZYME
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene-mediated (E1cB) path for basic hydrolysis of S-acetoacetylcoenzyme A and analogs, 1037–44

ACETOLYSIS
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31

ACETONE
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6

ACETOPHENONE
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with acetophenone in acid solution, 229–31
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51

ACETOTHIOLACETATE
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene-mediated (E1cB) path for basic hydrolysis of S-acetoacetylcoenzyme A and analogs, 1037–44

ACETOXY
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30

ACETOXYALKYLCINNAMIDE
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30

ACETOXYDIOXOLAN
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5

ACETYL
Investigation of the electronic structure of 2-(acetylamino)prop-2-enoic acid (N-acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
A proton nuclear magnetic resonance study of the interactions of vancomycin with N-acetyl-D-alanyl-D-alanine and related peptides, 1262–70

ACETYLACETONATE
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert-butyl hydroperoxide, 457–62

ACETYLALANYLALANINE
A proton nuclear magnetic resonance study of the interactions of vancomycin with N-acetyl-D-alanyl-D-alanine and related peptides, 1262–70

ACETYLATION
A new acid-catalyzed rearrangement of thiosulfinates to α-acetylthiosulfoxides in acetic anhydride, 432–40
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9

ACETYLBENZIMIDOYL
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9

ACETYLBENZIMIDOYLBENZAMIDOXIME
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9

ACETYLBENZOQUINONE
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
ACETYLBIPHENYL
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
ACETYLDEHYDROALANINE
Investigation of the electronic structure of 2–(acetylamino)prop–2–enoic acid (N–acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
ACETYLENE
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
ACETYLFLUORENE
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
ACETYLHISTIDINE
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N–acetylhistidine, and histidine–containing peptides, 447–51
ACETYLIMIDOXIME
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
ACETYLTHIO
A new acid–catalyzed rearrangement of thiosulfinates to α–acetylthiosulfoxides in acetic anhydride, 432–40
ACID
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
Conformational studies on 5–formyl–5,6,7,8–tetrahydrofolic acid (folinic acid) using proton and carbon–13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
A new acid–catalyzed rearrangement of thiosulfinates to α–acetylthiosulfoxides in acetic anhydride, 432–40
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 1. 5,5–Dialkyl–, 5–alkenyl–5–alkyl–, 5–alkyl–5–aryl–, 5,5–dialkenyl–, 5,5–diaryl– and 5,5–dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)–substituent effects with acid strength, 515–22
Acid–induced carbon–13 NMR chemical–shift changes of alcohol carbon atoms, 544–9
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas–phase decarboxylation of cyclopropylacetic acids, 553–6
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
A proton nuclear magnetic resonance study of the deprotonation of L–dopa and adrenaline, 1105–10
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
The mechanism of nitrosation of 4–nitrophenol with aqueous nitrous acid, 1783–7
ACIDITY
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
The kinetics of hydrolysis of N–trimethylammonioacetamide and of substituted N–trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
A proton nuclear magnetic resonance study of the deprotonation of L–dopa and adrenaline, 1105–10
Electrical effects in substituted thiazoles. pK_a Values of some 5–substituted 2–aminothiazoles 2–NN–dimethylaminothiazoles, 1156–8
ACRYLIC
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
ACTIVATION
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
ACTIVITY
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
ACYL
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
ACYLATION
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
ACYLBENZENE
The torsional barrier in aromatic carbonyl compounds, 363–9
ACYLBENZOQUINONE
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
ACYLHISTIDINE
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
ACYLISOIMIDE
The isoimide–imide rearrangement, 121–6
ACYLTHIYL
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504
ADAMANTYL
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance

ADAMANTYL(contd)
of HOMO–LUMO interactions in determining selectivity, 250–4
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Rearrangement of radical ipso intermediates by 1,2-shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
ADAMANTYLATION
Rearrangement of radical ipso intermediates by 1,2-shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
ADDITIVITY
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4-Substituted and 3,4-disubstituted anilines, 832–4
ADDN
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para-quinones, 225–8
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane, 385–90
Hydroxyl radical-induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ-complex formation in the reactions of N-substituted 2,4,6-trinitroanilines (picramides) with sodium methoxide in methanol, 752–7
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1-(substituted-aryl)butadienes. A ground-state substituent effect on an excited-state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
The kinetics and mechanism of the reaction of 5-fluorocytosine with hydroxylamine, 1460–6
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane-2,3-semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
An electron spin resonance study of sulfuranyl radicals of the type $R_2S{-}SX$ [X = CF_3 or R'C(O)], 1497–504
Nucleophilic addition to ferrocenyl-stabilized carbocations: the nature of the transition state, 1520–8
Conformation of α-substituted cycloalkyl radicals, 1761–3
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6-trinitrotoluene and 2,4,6-trinitrobenzyl chloride, 1850–3
The stabilities of Meisenheimer complexes. Part 22. The ionization of 2,4-dinitroaniline, its N-alkylated derivatives, and 2,6-dinitroaniline in methanol-dimethyl sulfoxide containing sodium methoxide, 1854–8
ADDUCT
Photoreduction and photoarylation of O-ethyl S-n-propyl phenylphosphonothioate, 198–205
Crystal structure of a 1:2 channel inclusion adduct of 5-methylbenzene-1,3-dicarboxaldehyde bis-(p-tolylsulfonylhydrazone) and benzene, 672–5
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
ADENOSYLCOBALAMIN
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
ADMANTYL
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α-methyl/hydrogen rate ratios in hexafluoropropan-2-ol-water, 1244–52
ADRENALINE
A proton nuclear magnetic resonance study of the deprotonation of L-dopa and adrenaline, 1105–10
AEROSOL
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
AGENT
X-ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo[1,5-a]pyridinium) bistetrafluoroborate(III), 1075–9
AGGREGATION
Aggregation of 4-substituted pyridine N-oxide-trifluoroacetates in benzene, 1516–19
ALANINE
Investigation of the electronic structure of 2-(acetylamino)prop-2-enoic acid (N-acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
The crystal structure of pivaloyl-D-prolyl-L-prolyl-L-alanyl-N-methylamide, 1800–4
ALANYLALANINE
A proton nuclear magnetic resonance study of the interactions of vancomycin with N-acetyl-D-alanyl-D-alanine and related peptides, 1262–70
ALANYLHYDANTOIN
Carbon-13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
ALC
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert-butyl hydroperoxide, 457–62
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o-benzeno, etheno, epoxy, or epithio functions, 486–92
Acid-induced carbon-13 NMR chemical-shift changes of alcohol carbon atoms, 544–9
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N-chlorobenzenesulfonamide, 676–8
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α-carbonylcarbene reactions, 1636–41
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
ALCOHOLYSIS
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride: calculation of the cavity terms, 854–9
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α-methyl/hydrogen rate ratios in hexafluoropropan-2-ol-water, 1244–52
ALDEHYDE
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl-substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ-radicals, 819–24
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
Conformational analysis of saturated heterocycles. Part 101. 1,3-

ALDEHYDE(contd)
Diazacyclohexanes and 1–thia–3–azacyclohexanes, 1746–51
ALIPH
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4–tert–butylthiane, 385–90
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
ALK
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open–chain sulfonate esters, 610–15
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
ALKALI
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
ALKALOID
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
ALKANE
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
ALKENE
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
ALKENESULFONYL
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
ALKENYL
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
ALKENYLANTHRACENE
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
ALKENYLBENZENE
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
ALKOXY
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
ALKOXYALKENE
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
ALKOXYL
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
ALKOXYPHOSPHORANYL
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
ALKOXYUREA
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N–hydroxy– and N–alkoxyureas, 1022–7
ALKYL
Aromatic sulfonation. Part 72. Behavior of some 9–alkylanthracenes containing 2 α–hydrogens and 0–3 β–hydrogens in the side–chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side–chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
Homosolvolysis, 260–6
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1–phenylethyl sulfoxides, 1306–12
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous

ALKYL(contd)
acetonitrile and of the reverse reactions, 1859–67
ALKYLAMINOPHENYL
Triplet-state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
ALKYLANILINE
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
ALKYLANTHRACENE
Aromatic sulfonation. Part 72. Behavior of some 9-alkylanthracenes containing 2 α-hydrogens and 0–3 β-hydrogens in the side-chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side-chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9-alkylanthracenes containing one side-chain α-hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 78. Behavior of some α-chloro-substituted 9-methyl-, 9-ethyl-, 9-isopropylanthracenes, and of 1,4,9-trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
ALKYLATION
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
ALKYLAZOFORMATE
Hydrolysis of azo esters via azoformate intermediates, 1238–43
ALKYLCINNAMIDE
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
ALKYLCYCLOHEXANE
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon-13 magnetic resonance spectroscopy, 255–9
ALKYLCYCLOPENTADIENYL
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
ALKYLETHYLIDENEOXONIUM
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
ALKYLMETHYLCYCLOBUTENE
The thermal ring opening of 3,3-disubstituted cyclobutenes, 1391–8
ALKYLPICRAMIDE
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ-complex formation in the reactions of N-substituted 2,4,6-trinitroanilines (picramides) with sodium methoxide in methanol, 752–7
ALKYLPYRIDINE
Determination of a new scale of ortho-steric parameters S^0 from N-methylation of pyridines, 1350–5
ALKYLPYRROLE
The conformational preferences of N-alkylpyrrole mono- and diesters: an infrared and nuclear magnetic resonance study, 737–40
ALKYLTHIOFORMAZAN
3-Carboxymethylthio-1,5-diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
ALKYLTHIOUREA
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
ALKYLTIN
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
ALKYNE
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
ALPHA
The crystal structure of the α form of quinol, 641–6
ALUMINUM
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
An electron spin resonance investigation of the reduction of o-diaroylbenzenes by Group III metals, 1788–91
AMIDATION
Linear free energy ortho-correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3-substituted 2-thenoyl chlorides with aniline in benzene, 1153–5
AMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
Homosolvolysis, 260–6
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl-amides and -amidines, 717–23
AMIDINE
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl-amides and -amidines, 717–23
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1-(N-tert-butylformimidoyl)imidazole and related imidazole-containing formamides, 1318–25
AMIDOXIME
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9
AMINATION
Base catalysis in the reactions between 2-fluoro-6-nitrobenzothiazole and aliphatic amines in benzene, 313–16
AMINE
Formation of superoxide radical anion in the horseradish peroxidase-catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O-acylisourea, 867–75
On the mechanism of protonation of triamines, 900–3
A proton nuclear magnetic resonance study of the deprotonation of L-dopa and adrenaline, 1105–10
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
AMINO
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω-phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side-chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride; calculation of the cavity terms, 854–9
The rearrangement of 2-amino-1,3,4-thiadiazines to 3-amino-2-thiazolimines. Part 1. The rates of rearrangement of a series of 5-alkyl- and 5-aryl-2-amino-1,3,4-thiadiazines at 30 and 50°C, 890–9
Electrical effects in substituted thiazoles. pK_a Values of some 5-substituted 2-aminothiazoles 2-NN-dimethylaminothiazoles, 1156–8
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N-acyl-L-histidine in micelles, 1483–7
Photochemical substitution of amino- and hydroxy-anthraquinones, 1544–8
Carbon-13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N-alkyl- or N-phenyl-substituted 5-amino-1,3,4-oxadiazole-2-carboxylic acids, 1627–30
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
AMINOANTHRAQUINONE
Photochemical substitution of amino- and hydroxy-anthraquinones, 1544–8

AMINOBENZOYLFURAZAN
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
AMINOETHANOL
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
AMINOETHYLAMIDE
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
AMINOIMIDAZOLINONE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
AMINOLYSIS
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
Intra– and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Kinetics of hydrolysis and aminolysis of 1–methoxycarbonylpyridinium ions, 741–8
Competing acyl transfer and intramolecular oxygen –> nitrogen acyl group migration from an isolable O–acylisourea, 867–75
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
AMINOOXADIAZOLECARBOXYLATE
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N–alkyl– or N–phenyl–substituted 5–amino–1,3,4–oxadiazole–2–carboxylic acids, 1627–30
AMINOPHENYL
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
AMINOPROPANETHIOL
Conformational analysis of saturated heterocycles. Part 101. 1,3–Diazacyclohexanes and 1–thia–3–azacyclohexanes, 1746–51
AMINOTHIADIAZINE
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
AMINOTHIAZOLE
Electrical effects in substituted thiazoles. pK_a Values of some 5–substituted 2–aminothiazoles 2–NN–dimethylaminothiazoles, 1156–8
AMMONIA
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)– and (E,Z)–diphenylallyl anions, 1419–20
AMMONIOACETAMIDE
The kinetics of hydrolysis of N–trimethylammonioacetamide and of substituted N–trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
AMMONIUM
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
AMMONIUMYL
Oxidation of thiols and disulfides with the ammoniumyl radical cation: an ESR investigation, 191–7
AMMONOLYSIS
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
AMP
Proton transfer from heterocyclic compounds. Part 10. Adenine mono– and polynucleotides, 441–6
ANDROSTANONE
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
ANGLE
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
ANHYDRIDE
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
ANILINE
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4–Substituted and 3,4–disubstituted anilines, 832–4
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
The conformations of cis and trans isomers of benzylideneanilines: ^1H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
ANILINIUM
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid–catalyzed reaction, 632–6
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
ANILINOISOUREA
Competing acyl transfer and intramolecular oxygen –> nitrogen acyl group migration from an isolable O–acylisourea, 867–75
ANILINOSPIROPHOSPHORANE
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
ANION
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
The radical ions of 4,5,7,8–tetramethyl[2.2]paracyclophane, 1045–50
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
ANISOLE
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2–selenienyl and 2–tellurienyl groups, 971–5
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
ANISYLDIAZONIUM
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16

ANODIC
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
ANTAGONIST
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
ANTHRACENE
Aromatic sulfonation. Part 72. Behavior of some 9–alkylanthracenes containing 2 α–hydrogens and 0–3 β–hydrogens in the side–chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side–chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
Aromatic sulfonation. Part 79. Sulfonation of some (poly)–methylanthracenes with dioxane–sulfur trioxide complex in dioxane, 911–14
ANTHRAQUINONE
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
ANTIAROM
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
ANTIBIOTIC
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
ANTIOXIDANT
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
APPARICINE
Conformational analysis of apparicine using proton nuclear magnetic relaxation: application of transient nuclear Overhauser enhancements, 919–24
ARALKANE
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
ARALKENE
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
ARENESULFENYL
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
AROM
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
Aromatic sulfonation. Part 72. Behavior of some 9–alkylanthracenes containing 2 α–hydrogens and 0–3 β–hydrogens in the side–chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side–chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
AROMATICITY
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
AROYLBENZENE
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
ARSINOSELENOYLETHANE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
ARYL
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 773–8
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
ARYLACRYLIC
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
ARYLALKYNE
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
ARYLAMIDE
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
ARYLAMIDOPYRIDAZINECARBOXYLATE
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
ARYLATION
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
ARYLAZOFORMATE
Hydrolysis of azo esters via azoformate intermediates, 1238–43
ARYLCARBENIUM
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
ARYLFLUORENE
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
ARYLMETHANE
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102

ARYLMETHYLCYCLOBUTENE
The thermal ring opening of 3,3-disubstituted cyclobutenes, 1391–8
ARYLMETHYLTHIOMETHYLBENZENE
Design of inclusion compounds: systematic structural modification of the hexa-host molecule hexakis(benzylthiomethyl)benzene, 999–1005
ARYLPENTADIENYL
Ion pairing of 1,5-diarylpentadienyl carbanions, 1137–40
ARYLPHOSPHORYLETHANOLAMINE
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
ARYLSULFENYLBENZYLMETHANE
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N-arylsulfenyl-N-benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
ASSOCN
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2-hydroxypyridines, 620–3
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron-deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5-dimethyl-3-methylsulfonylcyclohex-2-enone, 1166–9
An infrared study of the conformations and association of pyrrole-2-carbaldehydes and pyrrole-2-carboxylates, 1631–5
ASYM
Ring asymmetry in 4-morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta-1,5-dienes sensitized by aromatic ester, 1678–82
ATOM
Luminescence characteristics of thiamine derivatives, 1288–92
ATTACK
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
AZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
AZAPERHYDROPYRENE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
AZAPHENANTHRENE
Photochemistry of some azaphenanthrene N-oxides, 1159–61
AZATRICYCLOHEXADECANE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
AZIDE
The mechanism of cyclization of 1,4-diaryl-1-azido-2,3-diazabuta-1,3-dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
AZIRIDINE
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
AZLACTONE
Geminal and vicinal carbon-13–carbon-13 coupling constants in carboxylic acid derivatives, 1028–32
AZO
Thermodynamic analysis of proton dissociation equilibriums of some 4-diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
AZOBENZENE
Thermodynamic analysis of proton dissociation equilibriums of some 4-diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
AZOCARBOXYLATE
Hydrolysis of azo esters via azoformate intermediates, 1238–43
AZOFORMATE
Hydrolysis of azo esters via azoformate intermediates, 1238–43
BARBITURIC
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 1. 5,5-Dialkyl-, 5-alkenyl-5-alkyl-, 5-alkyl-5-aryl-, 5,5-dialkenyl-, 5,5-diaryl- and 5,5-dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)-substituent effects with acid strength, 515–22
BARRIER
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N-arylsulfenyl-N-benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
The torsional barrier in aromatic carbonyl compounds, 363–9
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
Nuclear magnetic resonance studies of N-nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl-amides and -amidines, 717–23
On the chirality of 2-hydroxy-N,N-dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
Conformational analysis of saturated heterocycles. Part 101. 1,3-Diazacyclohexanes and 1-thia-3-azacyclohexanes, 1746–51
BASE
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
Anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde and its Schiff base derivatives, 347–57
Base-catalyzed deuterium exchange reactions of 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane [pin-2(10)-ene] and 6,6-dimethylbicyclo[3.1.1]heptan-2-one (nopinone), 530–4
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Nitrile-forming eliminations from oxime ethers, 1313–17
BASICITY
3-Carboxymethylthio-1,5-diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Acid-induced carbon-13 NMR chemical-shift changes of alcohol carbon atoms, 544–9
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
BENZALDEHYDE
Anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde and its Schiff base derivatives, 347–57
The torsional barrier in aromatic carbonyl compounds, 363–9
BENZAMIDE
The dipole moments, molar Kerr constants, and solution-state conformation of some substituted benzamides, 235–8
The kinetics of hydrolysis of N-trimethylammonioacetamide and of substituted N-trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
BENZAMIDOXIME
Reaction of 1,3-dipoles in aqueous solution. 5. Structural studies on isolable (E)- and (Z)-NN-disubstituted amidoximes. Crystal and molecular structure of (E)-morpholino-p-nitrobenzamidoxime, 704–9
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9
BENZENE
Aromatic sulfonation. Part 74. Sulfonation of some 9-alkenylanthracenes and the corresponding benzenes with dioxane-sulfur

BENZENE(contd)
trioxide, 23–7
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5–tetramethylbenzene, naphthalene, and 1,6–methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
BENZENEDIAZONIUM
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
BENZENEDIAZOTATE
Crystallographic determination of the cis–configuration of syn–disodium 4–sulfonatobenzenediazotate, 1093–5
BENZENEDICARBOXALDEHYDE
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
BENZENO
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
BENZIL
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1–methylurea, and 1,3–dimethylurea with benzil in acid solution, 103–5
BENZIMIDOYLBENZAMIDOXIME
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
BENZO
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
BENZOATE
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
BENZOFURAZAN
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
BENZOIC
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
BENZOPHENONE
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
BENZOQUINONE
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
BENZOSEMIQUINONE
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
BENZOTHIAZOLE
Base catalysis in the reactions between 2–fluoro–6–nitrobenzothiazole and aliphatic amines in benzene, 313–16
BENZOXAZINE
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
BENZOYL
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
BENZOYLBENZENE
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
BENZOYLCARBENE
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
BENZOYLGLYCINE
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
BENZOYLISOIMIDE
The isoimide–imide rearrangement, 121–6
BENZOYLISOUREA
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
BENZOYLSARCOSINE
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
BENZYL
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
BENZYLAMIDE
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
BENZYLAMMONIUM
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
BENZYLDIHYDRONICOTINAMIDE
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15

BENZYLIDENE
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
BENZYLIDENEANILINE
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
BENZYLIDENEMETHYLAMINE
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
BENZYLMETHYLAMMONIUM
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
BENZYLPENICILLIN
Intra– and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
BENZYLTHIOMETHYLBENZENE
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
BENZYLTRIMETHYLAMMONIUM
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
BERBAMINE
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
BI
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
BIACETYL
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
BICYCLIC
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
BICYCLOHEPTYL
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92
BICYCLONONAN. THIONE
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ^4–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
BICYCLOOCTANE
The synthesis, stereochemistry, and crystal structure of exo–3–p–nitrobenzyl–endo–3–phenyl–3–phosphoniabicyclo[3.2.1]octane bromide, 1467–72
BICYCLOOCTANECARBOXYLATE
Conformation and reactivity. Part 9. Kinetics of the acid– or base–catalyzed methanolysis of the methyl esters of trans–decalin– or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
BICYCLOOCTANYL
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
BICYCLOPENTANE
Radical reactions of bicyclo[2.1.0]pentane, 1366–71
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
BIPHENYL
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
BIPYRIDYL
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
BIPYRIDYLRUTHENIUM
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
BIRADICAL
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Photochemistry of o–phthalaldehyde, 724–30
BIREFRINGENCE
The dipole moments, molar Kerr constants, and solution–state conformation of some substituted benzamides, 235–8
BISDIPHENYLPHOSPHINOSELENOYLETHANE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
BISMETHYLTHIO
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
BISMETHYLTHIOSULFONIUM
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
BISTHIOCARBAMOYLDIMETHYLAMINOPROPANE
The crystal and molecular structure of 1,3–bis(thiocarbamoyl)–2–N,N–dimethylaminopropane hydrochloride (Cartap), 1805–8
BITHIOPYRANYLIDENE
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
BLOCKING
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
BOND
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Homosolvolysis, 260–6
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
The crystal structure of the α form of quinol, 641–6
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
On hydrogen bonding in the intramolecularly chelated tautomers of enolic malondialdehyde and its mono– and dithio analogs, 1080–2
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,–26,29–heptaoxa[7^{3,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
A proton nuclear magnetic resonance study of the interactions of vancomycin with N–acetyl–D–alanyl–D–alanine and related peptides, 1262–70
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
BONDING
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
BOROHYDRIDE
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
BRIDGE
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
BRIDGING
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
BROENSTED
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4

BROMIDE
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
Solid-state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x-ray studies, 1415–18
The synthesis, stereochemistry, and crystal structure of exo-3-p-nitrobenzyl-endo-3-phenyl-3-phosphoniabicyclo[3.2.1]octane bromide, 1467–72
BROMO
An investigation into the structure and conformation of N-(4-bromophenyl)maleimide-^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Crystal and molecular structure of 2α-bromo-α-tetrahydrosantonin 1116–18
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
BROMOALKOXYPHENOXIDE
Ring-closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
BROMOBENZYL
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N-chlorobenzenesulfonamide, 676–8
BROMOCHLOROMETHANE
Photolysis of butane-2,3-dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
BROMOPHENYL
An investigation into the structure and conformation of N-(4-bromophenyl)maleimide-^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
BROMOPHENYLACETYLENE
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
BROMOPHENYLMALEIMIDE
An investigation into the structure and conformation of N-(4-bromophenyl)maleimide-^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
BROMOPHTHALIMIDE
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
BROMOTETRAHYDROSANTONIN
Crystal and molecular structure of 2α-bromo-α-tetrahydrosantonin 1116–18
BROMOTOLUENE
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
BURIMAMIDE
An infrared study of intramolecular hydrogen-bonding in the histamine H_2-receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
BUTADIENE
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1-(substituted-aryl)butadienes. A ground-state substituent effect on an excited-state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
BUTANEDIONE
Photolysis of butane-2,3-dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
BUTANOL
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
BUTOXYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
BUTYL
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert-butyl hydroperoxide, 457–62
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ-radicals, 819–24
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride; calculation of the cavity terms, 854–9
Evidence for the formation of thermally unstable dialkyl trioxide molecules using electron spin resonance spectroscopy, 981–4
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
High-pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
BUTYLAMINE
Base catalysis in the reactions between 2-fluoro-6-nitrobenzothiazole and aliphatic amines in benzene, 313–16
BUTYLBENZOYL
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
BUTYLBENZOYLKETENIMINE
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
BUTYLCHLOROTIN
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane-2,3-semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
BUTYLCYCLOHEXANECARBOXYLATE
Conformation and reactivity. Part 9. Kinetics of the acid- or base-catalyzed methanolysis of the methyl esters of trans-decalin- or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
BUTYLCYCLOHEXYL
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
BUTYLETHYLIDENEOXONIUM
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
BUTYLFORMAMIDINE
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1-(N-tert-butylformimidoyl)imidazole and related imidazole-containing formamides, 1318–25
BUTYLIMINIUM
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
BUTYLSTANNANE
Ring-opening of some radicals containing the cyclopropylmethyl system, 1473–82
BUTYLTHIANE
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane, 385–90
BUTYNEDIOATE
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
CALCN
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α-cholest-2-eno[3,2-b]pyridine, 598–602
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-

CALCN(contd)
dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
CAMPHIDINIUM
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
CARBANION
Ion pairing of 1,5–diarylpentadienyl carbanions, 1137–40
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)– and (E,Z)–diphenylallyl anions, 1419–20
CARBENE
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4–tert–butylthiane, 385–90
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
CARBENIUM
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
CARBOCATION
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
CARBON
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Conformational studies on 5–formyl–5,6,7,8–tetrahydrofolic acid (folinic acid) using proton and carbon–13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
The torsional barrier in aromatic carbonyl compounds, 363–9
Acid–induced carbon–13 NMR chemical–shift changes of alcohol carbon atoms, 544–9
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of
2–chloroo–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1–phenylethyl sulfoxides, 1305–12
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
CARBONYL
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
CARBONYLCARBENE
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
CARBOXALDEHYDE
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Rearrangement of radical ipso intermediates by 1,2–shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
CARBOXAMIDE
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
CARBOXY
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
CARBOXYALKYLFORMAZAN
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
CARBOXYALKYLTHIO
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
CARBOXYALKYLTHIOFORMAZAN
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
CARBOXYLATE
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
CARBOXYMETHYLTHIOFORMAZAN
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
CARBOXYPHENYLHYDRAZONE
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
CATALYSIS
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
A new acid–catalyzed rearrangement of thiosulfinates to α–acetylthiosulfoxides in acetic anhydride, 432–40
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
Structure–reactivity relationships and the mechanism of general

CATALYSIS(contd)
base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
Nitrile–forming eliminations from oxime ethers, 1313–17
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
Kinetic deuterium solvent isotope effects in the pyridine–catalyzed iodination of 2–nitropropane in aqueous and methanolic solutions, 1421–4
CATALYST
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Intra– and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
Base catalysis in the reactions between 2–fluoro–6–nitrobenzothiazole and aliphatic amines in benzene, 313–16
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
Competing acyl transfer and intramolecular oxygen –> nitrogen acyl group migration from an isolable O–acylisourea, 867–75
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
The mechanism of nitrosation of 4–nitrophenol with aqueous nitrous acid, 1783–7
CATION
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Electrochemical reduction of the 5,7–diphenyl–2,3–dihydro–1,4–diazepinium cation, 668–71
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
The electrochemical reduction of the 6–phenyl–2,3–dihydro–1,4–diazepinium cation and its 1–methyl and 5–methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
CD
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
CEPHALOSPORIN
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
CERIC
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
CHAIN
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
CHANNEL
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
CHARGE
Luminescence characteristics of thiamine derivatives, 1288–92
Chemical reactivity and electronic structure of N–methyl derivatives of xanthine, 1293–6
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
CHIRALITY
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
CHLORIDE
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4–Substituted and 3,4–disubstituted anilines, 832–4
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Configuration and conformation of acyl derivatives of hydroxylamine. Part 22. Hydroxamoyl chlorides. A revision, 1051–6
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
The stabilities of Meisenheimer complexes. Part 21. Sulfite

CHLORIDE(contd)
additions to 2,4,6–trinitrotoluene and 2,4,6–trinitrobenzyl chloride, 1850–3
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
CHLORINE
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
CHLORO
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
CHLOROACETONE
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
CHLOROACETOXYDIOXOLAN
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
CHLOROALKYLPEROXYL
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
CHLOROANILINE
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
CHLOROANTHRACENE
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
CHLOROBENZENE
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
CHLOROBENZENESULFONAMIDE
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
CHLOROBENZYL
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
CHLOROBUTYLTIN
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
CHLORODIMETHYLANILINIUM
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
CHLOROFLUOROBENZENE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
CHLOROFLUOROPYRIDINE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
CHLOROHYDROXYPYRIDINE
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
CHLOROIRIDATE
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
CHLOROMETHANE
Photolysis of butane–2,3–dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
CHLOROMETHYLPHENYLPROPANE
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
CHLORONITROANILINE
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
CHLOROPHENOL
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
CHOLESTENO
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
CHOLESTENOPYRIDINE
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
CHOLINE
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
CHROMATOG
Stereoselective reduction of indoline nitroxide radicals, 710–13
CHRYSENE
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
CHYMOTRYPSIN
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
CI
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
CIDNP
Photolysis of butane–2,3–dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
CIMETIDINE
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
CINNAMIDE
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
CIS
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
CLATHRATE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
CLEAVAGE
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open–chain sulfonate esters, 610–15
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92

CLEAVAGE(contd)
A study on the electrochemical reduction mechanism of rotenone, 1277–81
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
CLOSURE
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
Ring–closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
CNDO
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
On hydrogen bonding in the intramolecularly chelated tautomers of enolic malondialdehyde and its mono– and dithio analogs, 1080–2
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
COBALOXIME
Model experiments relevant to the mechanism of adenosylcobalamin–dependent–diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
COBALT
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
COBALTA
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
COENZYME
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
COLOR
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
COMBUSTION
Thermochemistry of bridged–ring substances. Enthalpies of formation of diamantan–1–, –3–, and –4–ol and of diamantanone 1686–9
COMPD
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,26,29–heptaoxa[7^{3,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
COND
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
CONDENSATION
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with acetophenone in acid solution, 229–31
CONDENSED
Aromatic sulfonation. Part 72. Behavior of some 9–alkylanthracenes containing 2 α–hydrogens and 0–3 β–hydrogens in the side–chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side–chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
CONFIGURATION
Stereoselective reduction of indoline nitroxide radicals, 710–13
The structure and absolute configuration of (–)–2β,9α–dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x–ray analysis of the mono–p–bromobenzoate, 763–7
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
Configuration and conformation of acyl derivatives of hydroxylamine. Part 22. Hydroxamoyl chlorides. A revision, 1051–6
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
CONFORMATION
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
Conformational studies on 5–formyl–5,6,7,8–tetrahydrofolic acid (folinic acid) using proton and carbon–13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
The dipole moments, molar Kerr constants, and solution–state conformation of some substituted benzamides, 235–8
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4–dimethyl–, 2,3,4–trimethyl–, and 2,2,3,4–tetramethyl–1–thia–3,4–diazacyclohexanes, 279–85
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
Acid–induced carbon–13 NMR chemical–shift changes of alcohol carbon atoms, 544–9
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
An investigation into the structure and conformation of N–(4–

CONFORMATION(contd)
bromophenyl)maleimide–^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Conformational analysis of apparicine using proton nuclear magnetic relaxation: application of transient nuclear Overhauser enhancements, 919–24
Allylic radicals from methylenecycloalkanes, 1063–6
Crystal and molecular structure of 2α–bromo–α–tetrahydrosantonin 1116–18
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
Conformational studies. Part 13. Proton NMR and x–ray analyses of 2β–bromo–3α–hydroxy–5α–pregnane–11,20–dione, 3α–hydroxy–2β–methoxy–5α–pregnane–11,20–dione, and 3α–hydroxy–2α–methyl–5α–pregnane–11,20–dione, 1176–82
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1–phenylethyl sulfoxides, 1306–12
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
The synthesis, stereochemistry, and crystal structure of exo–3–p–nitrobenzyl–endo–3–phenyl–3–phosphoniabicyclo[3.2.1]octane bromide, 1467–72
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
A conformational study of the 3–p–tolylsulfonylbutan–2–o^1 and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
Conformation of α–substituted cycloalkyl radicals, 1761–3
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
CONFORMATIONAL
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
CONJUGATION
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
CONST
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 1. 5,5–Dialkyl–, 5–alkenyl–5–alkyl–, 5–alkyl–5–aryl–, 5,5–dialkenyl–, 5,5–diaryl– and 5,5–dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)–substituent effects with acid strength, 515–22
Dissociation constants of the cyanohydrins of some substituted thian–4–ones, 714–16
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ$^-$ constants of 2–selenienyl and 2–tellurienyl groups, 971–5
An approach for assessing the relative importance of field and σ inductive contributions to polar substituent effects based on the nonproportionality of field and σ inductive substituent constants 985–92
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
The protonation of some 5–substituted thiophene–2–carboxamides, 1721–4
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
COPPER
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
CORRELATION
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)–substituent effects with acid strength, 515–22
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
COTTON
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
COUNTERION
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
COUPLING
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
CROWN
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–

CROWN(contd)
6 with benzylammonium thiocyanate, 1529–43
CRYSTAL
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
Diazepines. Part 24. Crystal and molecular structure of 2,3–dihydro–5,7–dimethyl–1,4–diazepinium perchlorate, 74–6
Synthesis and x–ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
Identification of the product from nicotine and sulfur as bis–1–methyl–2–(3–pyridyl)pyrrol–3–yl disulfide, 326–9
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
The crystal structure of the α form of quinol, 641–6
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
The structure and absolute configuration of (–)–2β,9α–dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x–ray analysis of the mono–p–bromobenzoate, 763–7
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ⁴–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
An investigation into the structure and conformation of N–(4–bromophenyl)maleimide–^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
Crystallographic determination of the cis–configuration of syn–disodium 4–sulfonatobenzenediazotate, 1093–5
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
Crystal and molecular structure of 2α–bromo–α–tetrahydrosantonin 1116–18
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron–deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5–dimethyl–3–methylsulfonylcyclohex–2–enone, 1166–9
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
Conformational studies. Part 13. Proton NMR and x–ray analyses of 2β–bromo–3α–hydroxy–5α–pregnane–11,20–dione, 3α–hydroxy–2β–methoxy–5α–pregnane–11,20–dione, and 3α–hydroxy–2α–methyl–5α–pregnane–11,20–dione, 1176–82
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,–26,29–heptaoxa[^{7,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
The synthesis, stereochemistry, and crystal structure of exo–3–p–nitrobenzyl–endo–3–phenyl–3–phosphoniabicyclo[3.2.1]octane bromide, 1467–72
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
Isolation and crystal structure of grilactone, a new guaianolide from Ferula oopoda, 1683–5
Structure and absolute configuration of vibsanine E isolated from leaves of Viburnum odoratissimum Ker, 1701–3
Conformational analysis of saturated heterocycles. 99. X–ray crystal structures of 1,2,4,5–tetraazacyclohexanes: molecular dimensions for examples of three out of the four conformations existing in solution, 1733–8
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7
The crystal structure of pivaloyl–D–prolyl–L–prolyl–L–alanyl–N–methylamide, 1800–4
The crystal and molecular structure of 1,3–bis(thiocarbamoyl)–2–N,N–dimethylaminopropane hydrochloride (Cartap), 1805–8
CTAB
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
CUMENE
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
CUMYLOXYL
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
CYANO
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
CYANOBENZENE
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
CYANOHYDRIN
Dissociation constants of the cyanohydrins of some substituted thian–4–ones, 714–16
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
CYANOPYRIDINE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
CYCLIC
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
A study of the aerial oxidation of L–cysteinyl–L–cysteine: purification of the product and equilibrium relationship involving

CYCLIC(contd)
the monomeric and dimeric cyclic derivatives, 1297–300
Ab initio calculations and photoelectron spectra of cyclic oxamides 1815–21
CYCLIZATION
The mechanism of cyclization of 1,4–diaryl–1–azido–2,3–diazabuta–1,3–dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
Photochemistry of o–phthalaldehyde, 724–30
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
A study of the aerial oxidation of L–cysteinyl–L–cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
CYCLOADDN
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
CYCLOALKANONE
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
CYCLOALKYL
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
Conformation of α–substituted cycloalkyl radicals, 1761–3
CYCLOBUTENE
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
CYCLOBUTYL
Conformation of α–substituted cycloalkyl radicals, 1761–3
CYCLOBUTYLCARBINYL
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92
CYCLOCONDENSATION
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1–methylurea, and 1,3–dimethylurea with benzil in acid solution, 103–5
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with 1–phenylpropane–1,2–dione in acid solution, 106–9
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with acetophenone in acid solution, 229–31
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4–dimethyl–, 2,3,4–trimethyl–, and 2,2,3,4–tetramethyl–1–thia–3,4–diazacyclohexanes, 279–85
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
Conformational analysis of saturated heterocycles. Part 100. 1–Oxa–3–azacyclohexanes, 1739–45
Conformational analysis of saturated heterocycles. Part 101. 1,3–Diazacyclohexanes and 1–thia–3–azacyclohexanes, 1746–51
Kinetics and mechanism of cyclization of N–(methylaminocarbonyl)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
CYCLODIMER
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
CYCLODODECAPEPTIDE
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
CYCLOHEXADIENYL
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
CYCLOHEXANE
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
CYCLOHEXANETHIONE
Gas–phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas–phase thermolysis of a thioketene S–oxide, 1206–11
CYCLOHEXANONE
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
CYCLOHEXAPEPTIDE
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
CYCLOHEXENE
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
CYCLOHEXENONE
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron–deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5–dimethyl–3–methylsulfonylcyclohex–2–enone, 1166–9
CYCLOHEXLCARBODIIMIDE
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
CYCLOHEXYL
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Conformation of α–substituted cycloalkyl radicals, 1761–3
CYCLOHEXYLANTHRACENE
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
CYCLOOCTADIENE
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
CYCLOOCTENE
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
CYCLOPENTADIENE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
CYCLOPENTADIENYL
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides,

CYCLOPENTADIENYL(contd)
and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane-2,3-semidione, $R_nCl_{3-n}SnOCMeCMeO$-, 1488–96
CYCLOPENTANE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
CYCLOPENTYL
Conformation of α-substituted cycloalkyl radicals, 1761–3
CYCLOPHANE
Electro-organic chemistry. Part 3. Transannular interaction and reactions of 5,13-disubstituted [2.2]metacyclophanes: substituent effects on carbon-13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
CYCLOPROPANE
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
CYCLOPROPYL
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Conformation of α-substituted cycloalkyl radicals, 1761–3
CYCLOPROPYLACETIC
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas-phase decarboxylation of cyclopropylacetic acids, 553–6
CYCLOPROPYLBENZENE
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
CYCLOPROPYLMETHYL
Ring-opening of some radicals containing the cyclopropylmethyl system, 1473–82
CYSTEINE
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
CYSTEINYL
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
CYSTEINYLCYSTEINE
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
DEACYLATION
Kinetics of sulfodeacylation of dimesityl ketone: a dual-path sequence of first-order reactions, 835–7
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O-acylisourea, 867–75
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
DEAMINATION
Activation parameters and mechanism of the deamination of N-substituted quinone monoimines and diimines, 1601–5
DECALINCARBOXYLATE
Conformation and reactivity. Part 9. Kinetics of the acid- or base-catalyzed methanolysis of the methyl esters of trans-decalin- or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
DECARBONYLATION
Photochemistry of α-aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o- and p-methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
DECARBOXYLATION
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas-phase decarboxylation of cyclopropylacetic acids, 553–6
Kinetics of sulfodeacylation of dimesityl ketone: a dual-path sequence of first-order reactions, 835–7
Photochemistry of α-aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o- and p-methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
Hydrolysis of azo esters via azoformate intermediates, 1238–43
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N-alkyl- or N-phenyl-substituted 5-amino-1,3,4-oxadiazole-2-carboxylic acids, 1627–30
DECAY
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
DECOMPN
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Keto-enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O-dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
DECYANATION
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
DEHYDRASE
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
DEHYDRATION
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational-analysis study, 1821–7
DEHYDRO
Investigation of the electronic structure of 2-(acetylamino)prop-2-enoic acid (N-acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
DEHYDROALANINE
Investigation of the electronic structure of 2-(acetylamino)prop-2-enoic acid (N-acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
DEISOPROPYLATION
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
DELOCALIZATION
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
DENITRATION
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
DENITROSATION
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
DENSITY
Chemical reactivity and electronic structure of N-methyl derivatives of xanthine, 1293–6
Photochemical substitution of amino- and hydroxy-anthraquinones, 1544–8
DETRITIATION
Proton transfer from heterocyclic compounds. Part 10. Adenine

DETRITIATION(contd)
mono- and polynucleotides, 441–6
DEUTERIUM
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
Base-catalyzed deuterium exchange reactions of 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane [pin-2(10)-ene] and 6,6-dimethylbicyclo[3.1.1]heptan-2-one (nopinone), 530–4
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene-mediated (E1cB) path for basic hydrolysis of S-acetoacetylcoenzyme A and analogs, 1037–44
Nucleophilic addition to ferrocenyl-stabilized carbocations: the nature of the transition state, 1520–8
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
DIALKYL
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three-electron-bond R_2SX radicals in aqueous solutions, 758–62
DIAMAGNETIC
The conformations of cis and trans isomers of benzylideneanilines: ^1H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
DIAMANTANOL
Thermochemistry of bridged-ring substances. Enthalpies of formation of diamantan-1-, -3-, and -4-ol and of diamantanone 1686–9
DIAMANTANONE
Thermochemistry of bridged-ring substances. Enthalpies of formation of diamantan-1-, -3-, and -4-ol and of diamantanone 1686–9
DIAMINE
Mechanism of the periodate oxidation of ethane-1,2-diamine, NN'-dimethylethane-1,2-diamine and 2-aminoethanol, 39–45
DIAROYLBENZENE
An electron spin resonance investigation of the reduction of o-diaroylbenzenes by Group III metals, 1788–91
DIARYL
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
DIARYLACRYLIC
The dissociation constants of the E- and Z-$\alpha\beta$-diarylacrylic acids, 161–4
DIARYLPHOSPHINAMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
DIASTEREOISOMER
Stereoselective reduction of indoline nitroxide radicals, 710–13
DIAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1-oxa-3,4-diaza-, 1-thia-3,4-diaza-, 1,2,4-triaza-, and 1,2,4,5-tetraazacyclohexanes, 91–5
Conformational analysis of saturated heterocycles. Part 101. 1,3-Diazacyclohexanes and 1-thia-3-azacyclohexanes, 1746–51
DIAZEPINIUM
Diazepines. Part 24. Crystal and molecular structure of 2,3-dihydro-5,7-dimethyl-1,4-diazepinium perchlorate, 74–6
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
DIAZO
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16
The reactivity of carbenes from photolysis of diazo compounds towards carbon-hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
DIAZONIUM
Homosolvolysis, 260–6
DIAZOTATE
Crystallographic determination of the cis-configuration of syn-disodium 4-sulfonatobenzenediazotate, 1093–5
DICATION
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
DICHLORINE
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical-cations in aqueous solution, 647–56
DIELEC
An approach for assessing the relative importance of field and σ inductive contributions to polar substituent effects based on the nonproportionality of field and σ inductive substituent constants 985–92
DIENE
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
DIESTER
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
The conformational preferences of N-alkylpyrrole mono- and diesters: an infrared and nuclear magnetic resonance study, 737–40
DIETHYLAMINOAZOBENZENE
Thermodynamic analysis of proton dissociation equilibriums of some 4-diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
DIFLUOROETHYL
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas-phase thermal reactions of trichloro(1-1-difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
DIHYDRO
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
Coenzyme models. Part 24. Micellar catalysis of flavin-mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
DIHYDROBENZOIC
X-ray crystallographic study of the preferred conformations of 2,6- and 3,5-dimethyl-1,4-dihydrobenzoic acids, 471–5
DIHYDROGEN
An infrared study of intramolecular hydrogen-bonding in the histamine H_2-receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
DIHYDROINDOLONE
Stereoselective reduction of indoline nitroxide radicals, 710–13
DIHYDROOXAZINE
The conformational equilibriums in a cyclohexene-like system: 3,6-dihydro-1,2-oxazine, 550–2
DIHYDROQUINOLINE
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
DIHYDROXY
The structure and absolute configuration of (–)-2β,9α-dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x-ray analysis of the mono-p-bromobenzoate, 763–7

DIHYDROXYALKYL
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
DIHYDROXYALKYLPYRIDINECOBALOXIME
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
DIHYDROXYVERRUCOSANE
The structure and absolute configuration of (–)-2β,9α-dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x-ray analysis of the mono-p-bromobenzoate, 763–7
DILACTONE
Crystal and molecular structure of melampodin B, a 4,5-cis-9,10-trans-germacranolide sesquiterpene dilactone, 1425–8
DIMER
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
DIMERIZATION
Photochemistry of o-phthalaldehyde, 724–30
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1-(substituted-aryl)butadienes. A ground-state substituent effect on an excited-state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
DIMETHYL
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid-catalyzed reaction, 632–6
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
Conformational studies. Part 14. An x-ray analysis of 6α-hydroxy-4,4-dimethylandrostan-3-one, 1183–5
DIMETHYLACETAMIDE
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
DIMETHYLAMINO
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
DIMETHYLAMINOIMIDAZOLINONE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
DIMETHYLANILINIUM
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid-catalyzed reaction, 632–6
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
DIMETHYLDIHYDROBENZOIC
X-ray crystallographic study of the preferred conformations of 2,6- and 3,5-dimethyl-1,4-dihydrobenzoic acids, 471–5
DIMETHYLDINITROTHIOPHENE
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
DIMETHYLTRINITRONAPHTHALENE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
DIMORPHOLINO
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
DIMORPHOLINODIHYDROTHIOPHENE
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
DIMROTH
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
DINITROANILINE
The stabilities of Meisenheimer complexes. Part 22. The ionization of 2,4-dinitroaniline, its N-alkylated derivatives, and 2,6-dinitroaniline in methanol–dimethyl sulfoxide containing sodium methoxide, 1854–8
DIOL
The structure and absolute configuration of (–)-2β,9α-dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x-ray analysis of the mono-p-bromobenzoate, 763–7
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
A hydrogen-bonded complex. The crystal structure of 1,5,12,16,23,-26,29-heptaoxa[7^{3,14}][5.5]orthocyclophane-naphthalene-2,3-diol monohydrate, 1253–8
DIOXADITHIANE
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
DIOXANE
Design of inclusion compounds: systematic structural modification of the hexa-host molecule hexakis(benzylthiomethyl)benzene, 999–1005
DIOXAPHOSPHOLAN
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
DIOXAZOLODIONE
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen-oxygen-heterocyclic molecular ions, 541–3
DIOXOLAN
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
DIPHENYL
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
Substitution reactions of phenylated aza-heterocycles. Part 1. Nitration of 2,5-diphenyl-1,3,4-oxadiazole: a product study using high performance liquid chromatography, 773–7
DIPHENYLALLYL
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)- and (E,Z)-diphenylallyl anions, 1419–20
DIPHENYLALLYLLITHIUM
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)- and (E,Z)-diphenylallyl anions, 1419–20
DIPHENYLAMINE
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
DIPHENYLOXADIAZOLE
Substitution reactions of phenylated aza-heterocycles. Part 1. Nitration of 2,5-diphenyl-1,3,4-oxadiazole: a product study using high performance liquid chromatography, 773–7
DIPHOSPHINE
A study of the inclusion properties of 1,2-bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
DIPOLE
The dipole moments, molar Kerr constants, and solution-state conformation of some substituted benzamides, 235–8
Configuration and conformation of acyl derivatives of hydroxylamine. Part 22. Hydroxamoyl chlorides. A revision, 1051–6
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
DIPYRRYLMETHANE
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16
DISPLACEMENT
Crown ethers as phase-transfer catalysts. A comparison of anionic activation in aqueous-organic two-phase systems and in low polarity anhydrous solutions by perhydrodibenzo-18-crown-6, lipophilic quaternary salts, and cryptands, 46–51
DISSOCN
The dissociation constants of the E- and Z-αβ-diarylacrylic acids, 161–4

DISSOCN(contd)
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 1. 5,5-Dialkyl-, 5-alkenyl-5-alkyl-, 5-alkyl-5-aryl-, 5,5-dialkenyl-, 5,5-diaryl- and 5,5-dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)-substituent effects with acid strength, 515–22
Dissociation constants of the cyanohydrins of some substituted thian-4-ones, 714–16
DISULFIDE
Oxidation of thiols and disulfides with the ammoniumyl radical cation: an ESR investigation, 191–7
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
DITERPENE
Base-catalyzed deuterium exchange reactions of 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane [pin-2(10)-ene] and 6,6-dimethylbicyclo[3.1.1]heptan-2-one (nopinone), 530–4
The structure and absolute configuration of (–)-2β,9α-dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x-ray analysis of the mono-p-bromobenzoate, 763–7
DITHIODINICOTYRINE
Identification of the product from nicotine and sulfur as bis-1-methyl-2-(3-pyridyl)pyrrol-3-yl disulfide, 326–9
DITHIZONE
3-Carboxymethylthio-1,5-diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
DOPA
A proton nuclear magnetic resonance study of the deprotonation of L-dopa and adrenaline, 1105–10
DOUBLE
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
DYPNONE
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with acetophenone in acid solution, 229–31
ELEC
The dipole moments, molar Kerr constants, and solution-state conformation of some substituted benzamides, 235–8
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'-bithiopyranylidene (BTP) 1578–85
ELECTROCHEM
Anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde and its Schiff base derivatives, 347–57
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N-hydroxy- and N-alkoxyureas, 1022–7
A study on the electrochemical reduction mechanism of rotenone, 1277–81
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
ELECTRON
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Electron-transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris-2,2'-bipyridylruthenium(-III) cation, 557–60
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
The photoelectron spectra of some 1,9-disubstituted phenalenes, 957–60
Linear free energy relations in the electron-transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
β-Thioxoketones. Part 6. Electronic absorption spectra of aromatic β-thioxoketones. A study of enol–enethiol tautomerism, 1768–73
ELECTRONIC
The torsional barrier in aromatic carbonyl compounds, 363–9
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
ELECTROPHILIC
Chemical reactivity and electronic structure of N-methyl derivatives of xanthine, 1293–6
ELECTROREDN
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
ELIMINATION
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4-dimethyl-1-phenyl-3-phospholene. Phosphinothioylidene, 1017–21
Nitrile-forming eliminations from oxime ethers, 1313–17
EMISSION
The photoelectron spectra of some 1,9-disubstituted phenalenes, 957–60
ENDOR
The radical ions of 4,5,7,8-tetramethyl[2.2]paracyclophane, 1045–50
ENERGY
The mechanism of hydrolysis and ethylaminolysis of N-benzoylglycine and N-benzoylsarcosine esters, 181–7
Intra- and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Laser flash photolysis of aromatic azo-hydrazone systems, 286–90
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N-arylsulfenyl-N-benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
The interpretation of quantitative linear correlations. Substituent effects on the properties of naphthalene and its derivatives, 330–8
The torsional barrier in aromatic carbonyl compounds, 363–9
Nuclear magnetic resonance studies of N-nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N-benzylidenemethylamines, 849–53
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride; calculation of the cavity terms, 854–9
Thermodynamic analysis of proton dissociation equilibriums of some 4-diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)-β-ionone and its isomeric α-pyran. Evidence for exciplex formation between the α-pyran and fluoren-9-one, 1057–62
Linear free energy ortho-correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3-substituted 2-thenoyl chlorides with aniline in benzene, 1153–5
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational

ENERGY(contd)
barrier of alkylanilines, 1704–7
ENOL
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
ENOLATE
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
ENTHALPY
Aggregation of 4–substituted pyridine N–oxide–trifluoroacetates in benzene, 1516–19
ENTROPY
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Aggregation of 4–substituted pyridine N–oxide–trifluoroacetates in benzene, 1516–19
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
ENVIRONMENT
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
ENZYME
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
EPIMERIZATION
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
EPITHIO
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
EPOXIDN
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30
EPOXY
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
EQUATORIAL
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
EQUIL
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
A study of the aerial oxidation of L–cysteinyl–L–cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)– and (E,Z)–diphenylallyl anions, 1419–20
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8–bis(dimethylamino)naphthalene (proton sponge), 1832–9
ERYTHROMYCIN
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
ESR
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Stereoselective reduction of indoline nitroxide radicals, 710–13
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
The radical ions of 4,5,7,8–tetramethyl[2.2]paracyclophane, 1045–50
Allylic radicals from methylenecycloalkanes, 1063–6
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
Conformation of α–substituted cycloalkyl radicals, 1761–3
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
ESTER
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure,

ESTER(contd)
temperature, and matrix on the insertion selectivity, 603–9
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
Conformation and reactivity. Part 9. Kinetics of the acid– or base–catalyzed methanolysis of the methyl esters of trans–decalin– or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
ETHANEDIAMINE
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
ETHANOL
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
ETHANOLAMINE
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
ETHANOLYSIS
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
ETHENE
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
ETHENO
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
ETHER
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
Nitrile–forming eliminations from oxime ethers, 1313–17
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
ETHOXIDE
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
ETHOXYCARBONYL
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
ETHOXYCARBONYLDIHYDROQUINOLINE
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
ETHOXYL
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
ETHYL
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
ETHYLAMINE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
ETHYLAMINO
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
ETHYLAMINOAZOBENZENE
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
ETHYLAMINOLYSIS
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
ETHYLAMMONIUM
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
ETHYLANTHRACENE
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
ETHYLBENZYL
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
ETHYLDIHYDROOXAZINE
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
ETHYLENE
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
ETHYLIDENEOXONIUM
Ion–dipole interactions in the unimolecular reactions of isolated

ETHYLIDENEOXONIUM(contd)
organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
ETHYLOXATRIAZOLE
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
ETHYLSILYL
Conformation of α–substituted cycloalkyl radicals, 1761–3
ETHYLUREA
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with 1–phenylpropane–1,2–dione in acid solution, 106–9
EXCHANGE
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
Base–catalyzed deuterium exchange reactions of 6,6–dimethyl–2–methylenebicyclo[3.1.1]heptane [pin–2(10)–ene] and 6,6–dimethylbicyclo[3.1.1]heptan–2–one (nopinone), 530–4
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid–catalyzed reaction, 632–6
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1–1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
Kinetics and mechanism of cyclization of N–(methylaminocarbonyl)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
EXCIPLEX
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
EXCITED
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
FADING
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
FERMI
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
FERRIC
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
FERROCENYL
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
FERROCENYLALKYL
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
FERROCENYLALKYLIUM
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
FERULA
Isolation and crystal structure of grilactone, a new guaianolide from Ferula oopoda, 1683–5
FLAVIN
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
FLUORENE
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
FLUORENONE
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
FLUORESCENCE
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
Luminescence characteristics of thiamine derivatives, 1288–92
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
FLUORINE
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
FLUORO
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
FLUOROACETATE
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
Aggregation of 4–substituted pyridine N–oxide–trifluoroacetates in benzene, 1516–19
FLUOROACETONE
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
FLUOROBENZENE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
FLUOROBORATE
Synthesis and x–ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
FLUOROCHOLINE
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
FLUOROCYTOSINE
The kinetics and mechanism of the reaction of 5–fluorocytosine with hydroxylamine, 1460–6
FLUOROETHYL
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
FLUOROETHYLAMINE
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–

FLUOROETHYLAMINE(contd)
dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
FLUOROETHYLCHLOROSILANE
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1-1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
FLUOROETHYLTRIETHYLAMMONIUM
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
FLUOROMETHYL
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
An electron spin resonance study of sulfuranyl radicals of the type R_2S–SX [X = CF_3 or R'C(O)], 1497–504
FLUORONITRO
Base catalysis in the reactions between 2–fluoro–6–nitrobenzothiazole and aliphatic amines in benzene, 313–16
FLUORONITROBENZOTHIAZOLE
Base catalysis in the reactions between 2–fluoro–6–nitrobenzothiazole and aliphatic amines in benzene, 313–16
FLUOROPHENYL
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
FLUOROPHENYLMETHANOL
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
FLUOROPROPANOLYSIS
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
FLUOROPYRIDINE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
FOLINIC
Conformational studies on 5–formyl–5,6,7,8–tetrahydrofolic acid (folinic acid) using proton and carbon–13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
FORCE
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
FORMALDEHYDE
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4–dimethyl–, 2,3,4–trimethyl–, and 2,2,3,4–tetramethyl–1–thia–3,4–diazacyclohexanes, 279–85
Conformational analysis of saturated heterocycles. Part 100. 1–Oxa–3–azacyclohexanes, 1739–45
FORMAMIDINE
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1–(N–tert–butylformimidoyl)imidazole and related imidazole–containing formamides, 1318–25
FORMATION
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1–(substituted–aryl)butadienes. A ground–state substituent effect on an excited–state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
Nitrile–forming eliminations from oxime ethers, 1313–17
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
Thermochemistry of bridged–ring substances. Enthalpies of formation of diamantan–1–, –3–, and –4–ol and of diamantanone 1686–9
FORMAZAN
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
FORMIC
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
FORMYLBENZOQUINONE
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
FORMYLGUANIDINIUM
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
FRACTIONATION
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8–bis(dimethylamino)naphthalene (proton sponge), 1832–9
FRAGMENTATION
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
FREE
The torsional barrier in aromatic carbonyl compounds, 363–9
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
FRIES
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
FUNCTION
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
FURAN
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
FURANYLACRYLIC
The dissociation constants of the E– and Z–α,β–diarylacrylic acids, 161–4
FURAZAN
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
GEOMETRY
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
GERMACRANOLIDE
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
GERMANE
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
GLUCOPYRANOSIDE
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
GLUCOPYRANOSYL
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83

GLUCOPYRANOSYLPYRIDINIUM
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
GLUCOSIDASE
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
GLUTATHIONE
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
GLYCINE
Kinetics and mechanism of cyclization of N–(methylaminocarbonyl)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
GLYCOPYRANOSIDE
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
GLYCOSYLATION
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
GRILACTONE
Isolation and crystal structure of grilactone, a new guaianolide from Ferula oopoda, 1683–5
GROUP
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
GROWTH
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
GUANIDINE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
HALIDE
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Homosolvolysis, 260–6
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–95
HALO
Homosolvolysis, 260–6
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
HALOALKANE
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 295–9
HALOAROM
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
HALOBENZENE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
HALOGEN
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1–1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
HALOKETONE
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
HALOMETHYLGERMANE
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
HALOMETHYLSILANE
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
HALONITROBENZOFURAZAN
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
HALOPHENYLACETYLENE
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
HALOPYRIDINE
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
HEAT
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)– and (E,Z)–diphenylallyl anions, 1419–20
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Thermochemistry of bridged–ring substances. Enthalpies of formation of diamantan–1–, –3–, and –4–ol and of diamantanone 1686–9
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
HEAVY
Luminescence characteristics of thiamine derivatives, 1288–92
HEMI
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
HEMIHYDROCHLORIDE
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
HEMIORTHOESTER
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
HEMIORTHOFORMATE
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
HEPTANE
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
HEPTAOXAORTHOCYCLOPHANE
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,26,29–heptaoxa[$7^{3.14}$][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
HERNANDEZINE
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
HETEROCYCLE
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
HETEROPHANE
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
HEXA
Design of inclusion compounds: systematic structural modification

HEXA(contd)
of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
HEXAAZA
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ^4–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
HEXAAZAPHOSPHABICYCLONONANETHIONE
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ^4–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
HEXAFLUOROACETONE
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
HEXAMETHYL
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
HEXANAL
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl–substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
HEXAPEPTIDE
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
HEXENE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
HEXENONE
Photochemistry of acylic $\beta\gamma$–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
HINDERED
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
HINDRANCE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
HIPPURATE
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
HISTAMINE
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N–acetylhistidine, and histidine–containing peptides, 447–51
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
HISTIDINE
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N–acetylhistidine, and histidine–containing peptides, 447–51
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
HISTIDYL
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
HOMOLYSIS
Homosolvolysis, 260–6
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
HOMOLYTIC
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
HOMOSOLVOLYSIS
Homosolvolysis, 260–6
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
HUECKEL
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
HYDANTOIN
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
HYDRATION
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
HYDRAZINOLYSIS
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
HYDRAZONE
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
HYDRIDE
Sodium borohydride as a reagent for nucleoophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
HYDRO
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
HYDROBROMINATION
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
HYDROCARBYLOXYCARBONYLDIHYDROQUINOLINE
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
HYDROCHLORIDE
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
HYDROCHLORINATION
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
HYDRODIAZEPINIUM
Diazepines. Part 24. Crystal and molecular structure of 2,3–dihydro–5,7–dimethyl–1,4–diazepinium perchlorate, 74–6
Electrochemical reduction of the 5,7–diphenyl–2,3–dihydro–1,4–diazepinium cation, 668–71
HYDROFURAN
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
HYDROGEN
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9

HYDROGEN(contd)
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
Base–catalyzed deuterium exchange reactions of 6,6–dimethyl–2–methylenebicyclo[3.1.1]heptane [pin–2(10)–ene] and 6,6–dimethylbicyclo[3.1.1]heptan–2–one (nopinone), 530–4
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid–catalyzed reaction, 632–6
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
The crystal structure of the α form of quinol, 641–6
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
Model experiments relevant to the mechanism of adenosylcobalamin–dependent–diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
On hydrogen bonding in the intramolecularly chelated tautomers of enolic malondialdehyde and its mono– and dithio analogs, 1080–2
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,–26,29–heptaoxa[$7^{3,14}$][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
A proton nuclear magnetic resonance study of the interactions of vancomycin with N–acetyl–D–alanyl–D–alanine and related peptides, 1262–70
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
HYDROHALOGENATION
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
HYDROINDOLE
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
HYDROLYSIS
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
The kinetics of hydrolysis of N–trimethylammonioacetamide and of substituted N–trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open–chain sulfonate esters, 610–15
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Kinetics of hydrolysis and aminolysis of 1–methoxycarbonylpyridinium ions, 741–8
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
Hydrolysis of azo esters via azoformate intermediates, 1238–43
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1–(N–tert–butylformimidoyl)imidazole and related imidazole–containing formamides, 1318–25
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N–acyl–L–histidine in micelles, 1483–7
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
HYDROOXAZINE
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
HYDROPEROXIDE
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
HYDROPYRAN
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
HYDROQUINOLINE
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–

HYDROQUINOLINE(contd)
dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
HYDROQUINOLINODIOXAZOLODIONE
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
HYDROTRIPTYCENE
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
HYDROXAMOYL
Configuration and conformation of acyl derivatives of hydroxylamine. Part 22. Hydroxamoyl chlorides. A revision, 1951–6
HYDROXIDE
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8–bis(dimethylamino)naphthalene (proton sponge), 1832–9
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
HYDROXOSULFOXIDE
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
HYDROXY
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Stereoselective reduction of indoline nitroxide radicals, 710–13
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N–hydroxy– and N–alkoxyureas, 1022–7
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
HYDROXYANTHRAQUINONE
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
HYDROXYCYCLOHEXADIENYL
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
HYDROXYDIALKYLTHIOBENZAMIDE
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
HYDROXYDIMETHYLANDROSTANONE
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
HYDROXYDIOXOLAN
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
HYDROXYDIPHENYLINDOLINE
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
HYDROXYDIPHENYLMETHYL
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
HYDROXYETHYL
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
HYDROXYHEXENE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
HYDROXYINDOLE
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
HYDROXYL
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
HYDROXYLAMINE
Stereoselective reduction of indoline nitroxide radicals, 710–13
The kinetics and mechanism of the reaction of 5–fluorocytosine with hydroxylamine, 1460–6
HYDROXYMETHOXYMETHYLBENZALDEHYDE
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
HYDROXYMETHYLANDROSTANONE
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
HYDROXYNORBORNANE
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
HYDROXYNORBORNANECARBOXAMIDE
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
HYDROXYPENTENE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
HYDROXYPHENYLPROPIONIC
A proton nuclear magnetic resonance study of the deprotonation of L–dopa and adrenaline, 1105–10
HYDROXYPREGNANEDIONE
Conformational studies. Part 13. Proton NMR and x–ray analyses of 2β–bromo–3α–hydroxy–5α–pregnane–11,20–dione, 3α–hydroxy–2β–methoxy–5α–pregnane–11,20–dione, and 3α–hydroxy–2α–methyl–5α–pregnane–11,20–dione, 1176–82
HYDROXYPYRIDINE
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
HYDROXYQUINOLYLINDANEDIONE
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
HYDROXYUREA
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N–hydroxy– and N–alkoxyureas, 1022–7
HYDROXYVERRUCOSANE
The structure and absolute configuration of (–)–2β,9α–dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x–ray analysis of the mono–p–bromobenzoate, 763–7
HYDROXYVINCANE
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part

HYDROXYVINCANE(contd)
1. Vincane derivatives, 701–3
HYPERCONJUGATION
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
HYROLYSIS
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
II
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
IMIDAZO
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
IMIDAZOIMIDAZOLEDIONE
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1–methylurea, and 1,3–dimethylurea with benzil in acid solution, 103–5
IMIDAZOLE
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1–(N–tert–butylformimidoyl)imidazole and related imidazole–containing formamides, 1318–25
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
IMIDAZOLINONE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
IMIDAZOPYRIDINE
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
IMIDAZOPYRIDINIUM
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
IMIDAZOTHIADIAZOLE
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
IMIDOYL
The mechanism of cyclization of 1,4–diaryl–1–azido–2,3–diazabuta–1,3–dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
IMINE
Activation parameters and mechanism of the deamination of N–substituted quinone monoimines and diimines, 1601–5
IMINIUM
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
INCLUSION
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
INDANEDIONE
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
INDENE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
INDO
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
INDOLE
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
INDOLINE
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Stereoselective reduction of indoline nitroxide radicals, 710–13
INDOLYL
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
INDUCTIVE
An approach for assessing the relative importance of field and σ inductive contributions to polar substituent effects based on the nonproportionality of field and σ inductive substituent constants 985–92
INHIBITION
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
INSERTION
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
INTERACTION
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
INTERCONVERSION
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
INTRAMOL
3–Carboxymethylthio–1,5–diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1–1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8

INVERSION
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
The mechanism of cyclization of 1,4–diaryl–1–azido–2,3–diazabuta–1,3–dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
An investigation into the structure and conformation of N–(4–bromophenyl)maleimide–^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
Conformational analysis of saturated heterocycles. Part 100. 1–Oxa–3–azacyclohexanes, 1739–45
Conformational analysis of saturated heterocycles. Part 101. 1,3–Diazacyclohexanes and 1–thia–3–azacyclohexanes, 1746–51
IODIDE
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Luminescence characteristics of thiamine derivatives, 1288–92
Determination of a new scale of ortho–steric parameters S^0 from N–methylation of pyridines, 1350–5
IODINATION
Kinetic deuterium solvent isotope effects in the pyridine–catalyzed iodination of 2–nitropropane in aqueous and methanolic solutions, 1421–4
IODINE
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
IODOACETOXYDIMETHYLANDROSTANONE
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
ION
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
The radical ions of 4,5,7,8–tetramethyl[2.2]paracyclophane, 1045–50
Ion pairing of 1,5–diarylpentadienyl carbanions, 1137–40
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
IONIZATION
Thermodynamic analysis of proton dissociation equilibriums of some 4–diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ^- constants of 2–selenienyl and 2–tellurienyl groups, 971–5
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
IONONE
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
IPSO
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
IR
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
A conformational study of the 3–p–tolylsulfonylbutan–2–ol and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
IRIDATE
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
ISOBUTYLENE
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
ISOCYANIDE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
ISOIMIDE
The isoimide–imide rearrangement, 121–6
ISOMER
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
The conformations of cis and trans isomers of benzylideneanilines: ^1H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
ISOMERISM
Acid–induced carbon–13 NMR chemical–shift changes of alcohol carbon atoms, 544–9
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
ISOMERIZATION
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
Base–catalyzed deuterium exchange reactions of 6,6–dimethyl–2–methylenebicyclo[3.1.1]heptane [pin–2(10)–ene] and 6,6–dimethylbicyclo[3.1.1]heptan–2–one (nopinone), 530–4
Photochemistry of acylic $\beta\gamma$–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–

ISOMERIZATION(contd)
phenylpent-3-en-1-ones, 592–7
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)-β-ionone and its isomeric α-pyran. Evidence for exciplex formation between the α-pyran and fluoren-9-one, 1057–62
On the reaction between potassium ethoxide and 3-amino-4-benzoylfurazan: the crystal structure of the intermediate, 5-phenyl-1,2,4-oxadiazole-3-carboxamide, 1096–8
Photochemistry of some azaphenanthrene N-oxides, 1159–61
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas-phase thermal reactions of trichloro(1-1-difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
The thermal ring opening of 3,3-disubstituted cyclobutenes, 1391–8
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)- and (E,Z)-diphenylallyl anions, 1419–20
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta-1,5-dienes sensitized by aromatic ester, 1678–82
Isolation and structural structure of grilactone, a new guaianolide from Ferula oopoda, 1683–5
ISOPRENE
An empirical determination of carbon-13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
ISOPROPANOL
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert-butyl hydroperoxide, 457–62
Photolysis of butane-2,3-dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α-carbonylcarbene reactions, 1636–41
ISOPROPENYL
An empirical determination of carbon-13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
ISOPROPENYLCYCLOHEXENE
An empirical determination of carbon-13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
ISOPROPYL
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane, 385–90
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
ISOPROPYLANTHRACENE
Aromatic sulfonation. Part 78. Behavior of some α-chloro-substituted 9-methyl-, 9-ethyl-, 9-isopropylanthracenes, and of 1,4,9-trimethylanthracene in dioxane-sulfur trioxide complex in dioxane as sulfonating medium, 904–10
ISOPROPYLBENZENE
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
ISOPROPYLCYCLOHEXANE
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon-13 magnetic resonance spectroscopy, 255–9
ISOPROPYLDIHYDROOXAZINE
The conformational equilibriums in a cyclohexene-like system: 3,6-dihydro-1,2-oxazine, 550–2
ISOQUINOLINE
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
ISOTOPE
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5-tetramethylbenzene, naphthalene, and 1,6-methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
Model experiments relevant to the mechanism of adenosylcobalamin-dependent-diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene-mediated (E1cB) path for basic hydrolysis of S-acetoacetylcoenzyme A and analogs, 1037–44
A proton nuclear magnetic resonance study of the deprotonation of L-dopa and adrenaline, 1105–10
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
Nucleophilic addition to ferrocenyl-stabilized carbocations: the nature of the transition state, 1520–8
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
ISOTOPIC
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
ISOUREA
Competing acyl transfer and intramolecular oxygen -> nitrogen acyl group migration from an isolable O-acylisourea, 867–75
KAMLET
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
KERR
The dipole moments, molar Kerr constants, and solution-state conformation of some substituted benzamides, 235–8
KETENE
Keto-enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Gas-phase thermolyses. Part 3. Gas-phase thermolysis of silylated thionocarboxylic acid derivatives: a route to thioketenes?, 1557–62
KETENIMINE
Rapid acid-catalyzed and uncatalyzed hydration of ketenimines, 579–91
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
KETONE
Photochemistry of acylic βγ-unsaturated ketones. Part 4. The effect of α-methyl substitution with some hex-4-en-2-ones and 1-phenylpent-3-en-1-ones, 592–7
Kinetics of sulfodeacylation of dimesityl ketone: a dual-path sequence of first-order reactions, 835–7
KINETIC
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5-tetramethylbenzene, naphthalene, and 1,6-methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
Reaction of 1,3-dipoles in aqueous solution. 5. Structural studies on isolable (E)- and (Z)-NN-disubstituted amidoximes. Crystal and molecular structure of (E)-morpholino-p-nitrobenzamidoxime, 704–9
KINETICS
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω-phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent

KINETICS(contd)
at position 1. Comparison of the side-chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Mechanism of the periodate oxidation of ethane-1,2-diamine, NN'-dimethylethane-1,2-diamine and 2-aminoethanol, 39–45
Crown ethers as phase-transfer catalysts. A comparison of anionic activation in aqueous–organic two-phase systems and in low polarity anhydrous solutions by perhydrodibenzo-18-crown-6, lipophilic quaternary salts, and cryptands, 46–51
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
Photochemistry of α-substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1-methylurea, and 1,3-dimethylurea with benzil in acid solution, 103–5
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16
The isoimide–imide rearrangement, 121–6
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
The mechanism of hydrolysis and ethylaminolysis of N-benzoylglycine and N-benzoylsarcosine esters, 181–7
Photoreduction and photoarylation of O-ethyl S-n-propyl phenylphosphonothioate, 198–205
Intra- and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Buffer catalysis in the hydrazinolysis of benzylpenicillin, 220–4
Reactivity of 7-halo-4-nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Kinetic and spectroscopic studies with a rapid-scanning spectrometer. Part 2. Intermediates in the one-equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl-substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
Base catalysis in the reactions between 2-fluoro-6-nitrobenzothiazole and aliphatic amines in benzene, 313–16
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
The kinetics of hydrolysis of N-trimethylammonioacetamide and of substituted N-trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
Hydroxyl radical-induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
A new acid-catalyzed rearrangement of thiosulfinates to α-acetylthiosulfoxides in acetic anhydride, 432–40
Proton transfer from heterocyclic compounds. Part 10. Adenine mono- and polynucleotides, 441–6
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N-acetylhistidine, and histidine-containing peptides, 447–51
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert-butyl hydroperoxide, 457–62
Base-catalyzed deuterium exchange reactions of 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane [pin-2(10)-ene] and 6,6-dimethylbicyclo[3.1.1]heptan-2-one (nopinone), 530–4
The mechanism of cyclization of 1,4-diaryl-1-azido-2,3-diazabuta-1,3-dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas-phase decarboxylation of cyclopropylacetic acids, 553–6
Electron-transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris-2,2'-bipyridylruthenium(-III) cation, 557–60
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
Rapid acid-catalyzed and uncatalyzed hydration of ketenimines, 579–91
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open-chain sulfonate esters, 610–15
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid-catalyzed reaction, 632–6
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N-chlorobenzenesulfonamide, 676–8
Hydroxy-group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure-reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Hydrogen-deuterium exchange of the C-2 protons of histidine and histidine peptides and proteins, 693–9
Reaction of 1,3-dipoles in aqueous solution. 5. Structural studies on isolable (E)- and (Z)-NN-disubstituted amidoximes. Crystal and molecular structure of (E)-morpholino-p-nitrobenzamidoxime, 704–9
Photochemistry of o-phthalaldehyde, 724–30
Kinetics of hydrolysis and aminolysis of 1-methoxycarbonylpyridinium ions, 741–8
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ-complex formation in the reactions of N-substituted 2,4,6-trinitroanilines (picramides) with sodium methoxide in methanol, 752–7
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three-electron-bond R_2SX radicals in aqueous solutions, 758–62
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
The kinetics and mechanism of the acid-catalyzed hydrolysis of N-

KINETICS(contd)
vinylpyrrolidin–2–one, 825–8
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4–Substituted and 3,4–disubstituted anilines, 832–4
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
Competing acyl transfer and intramolecular oxygen –> nitrogen acyl group migration from an isolable O–acylisourea, 867–75
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4–dimethyl–1–phenyl–3–phospholene. Phosphinothioylidene, 1017–21
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1–1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
Conformation and reactivity. Part 9. Kinetics of the acid– or base–catalyzed methanolysis of the methyl esters of trans–decalin– or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
Hydrolysis of azo esters via azoformate intermediates, 1238–43
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
A study on the electrochemical reduction mechanism of rotenone, 1277–81
Nitrile–forming eliminations from oxime ethers, 1313–17
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1–(N–tert–butylformimidoyl)imidazole and related imidazole–containing formamides, 1318–25
Formation, rearrangement, and hydrolysis of enol esters derived from isoxazolium salts, 1326–30
Determination of a new scale of ortho–steric parameters S^0 from N–methylation of pyridines, 1350–5
Synthesis, structure, and reactions of secosteroids containing a medium–sized ring. Part 17. Structure–reactivity relationship in the solvolysis of 5,10–secosteroidal 3–tolylsulfonates, 1356–65
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
Catalysis by β–glucosidase A_3 of Aspergillus wentii, 1376–83
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
Kinetic deuterium solvent isotope effects in the pyridine–catalyzed iodination of 2–nitropropane in aqueous and methanolic solutions, 1421–4
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
The kinetics and mechanism of the reaction of 5–fluorocytosine with hydroxylamine, 1460–6
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
Activation parameters and mechanism of the deamination of N–substituted quinone monoimines and diimines, 1601–5
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N–alkyl– or N–phenyl–substituted 5–amino–1,3,4–oxadiazole–2–carboxylic acids, 1627–30
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
Linear free energy relations in the electron–transfer reaction between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
Kinetics and mechanism of cyclization of N–(methylaminocarbonyl)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
Ring–closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
The mechanism of nitrosation of 4–nitrophenol with aqueous nitrous acid, 1783–7
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6–trinitrotoluene and 2,4,6–trinitrobenzyl chloride, 1850–3
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl–stabilized carbocations in aqueous

KINETICS(contd)
acetonitrile and of the reverse reactions, 1859–67
LACTONIZATION
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
LANTHANUM
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
LENGTH
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
LEVEL
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
LFER
Substituent effects on a reversible cycloaddition reaction, 4–7
LIFETIME
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Photochemistry of o–phthalaldehyde, 724–30
LIGAND
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
LINEAR
The mechanism of hydrolysis and ethylaminolysis of N–benzoylglycine and N–benzoylsarcosine esters, 181–7
Intra– and intermolecular catalysis in the aminolysis of benzylpenicillin, 212–19
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
The interpretation of quantitative linear correlations. Substituent effects on the properties of naphthalene and its derivatives, 330–8
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
LUBRICATING
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
LYSINE
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
MACROCYCLE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
MACROLIDE
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
MAGNETIC
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Conformational analysis of apparicine using proton nuclear magnetic relaxation: application of transient nuclear Overhauser enhancements, 919–24
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
MALEIMIDE
An investigation into the structure and conformation of N–(4–bromophenyl)maleimide–^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
MALONATE
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
MALONDIALDEHYDE
On hydrogen bonding in the intramolecularly chelated tautomers of enolic malondialdehyde and its mono– and dithio analogs, 1080–2
MATRIX
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
MCLAFFERTY
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl–substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
MECHANICS
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Thermochemistry of bridged–ring substances. Enthalpies of formation of diamantan–1–, –3–, and –4–ol and of diamantanone 1686–9
MECHANISM
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
Reactions of palladium(II) with organic compounds. Part 5. Effect of reaction conditions upon products of oxidation of α–methylstyrene, 1099–104
Gas–phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas–phase thermolysis of a thioketene S–oxide, 1206–11
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
Radical reactions of bicyclo[2.1.0]pentane, 1366–71
MEDIATION
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
MEDIUM
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
MEGALOMICIN
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
MELAMPODIN
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
MENTHYL
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
MERCURATION
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
MERCURY
Kinetics and mechanism of mercuriation of aromatic compounds by

MERCURY(contd)
mercury trifluoroacetate in trifluoroacetic acid, 267–72
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
MESITOIC
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
MESITOYLBENZENE
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
MESITYL
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
MESITYLPHOSPHINAMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
META
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
METACYCLOPHANE
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
METAL
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
METALLOCYCLE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
METHANESULFONATE
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
METHANOANNULENE
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5–tetramethylbenzene, naphthalene, and 1,6–methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
METHANOL
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1–(substituted–aryl)butadienes. A ground–state substituent effect on an excited–state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
METHANOLYSIS
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Conformation and reactivity. Part 9. Kinetics of the acid– or base–catalyzed methanolysis of the methyl esters of trans–decalin– or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
METHIONINE
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
METHOXIDE
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ–complex formation in the reactions of N–substituted 2,4,6–trinitroanilines (picramides) with sodium methoxide in methanol, 752–7
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
The stabilities of Meisenheimer complexes. Part 22. The ionization of 2,4–dinitroaniline, its N–alkylated derivatives, and 2,6–dinitroaniline in methanol–dimethyl sulfoxide containing sodium methoxide, 1854–8
METHOXY
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
The torsional barrier in aromatic carbonyl compounds, 363–9
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
METHOXYACYLBENZENE
The torsional barrier in aromatic carbonyl compounds, 363–9
METHOXYBENZALDEHYDE
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
METHOXYBENZO
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
METHOXYBENZOSEMIQUINONE
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
METHOXYBENZYL
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
METHOXYBENZYLTRIMETHYLAMMONIUM
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
METHOXYCARBONYL
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
Kinetics of hydrolysis and aminolysis of 1–methoxycarbonylpyridinium ions, 741–8
METHOXYCARBONYLCARBENE
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
METHOXYCARBONYLPYRIDINIUM
Kinetics of hydrolysis and aminolysis of 1–methoxycarbonylpyridinium ions, 741–8
METHOXYCARBONYLPYRROLE
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
METHOXYCARBONYLTHIOPHENE
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
METHOXYCARBONYLVINCANE
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
METHOXYDIMETHYLANILINIUM
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
METHOXYLATION
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
METHOXYMETHYL
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
METHOXYPHENYLACETIC
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreact-

METHOXYPHENYLACETIC(contd)
ions of some asymmetrical anhydrides derived from o- and p-methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
METHOXYPHENYLETHYL
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1-(p-methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
METHOXYPHENYLETHYLAMINE
A proton nuclear magnetic resonance study of the deprotonation of L-dopa and adrenaline, 1105–10
METHOXYPHENYLETHYLAMMONIUM
Stereochemistry of photosolvolysis of (–)-1-phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
METHOXYPYRIDINE
Aggregation of 4-substituted pyridine N-oxide-trifluoroacetates in benzene, 1516–19
METHOXYQUINOLINE
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
METHYL
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Stereochemistry of photosolvolysis of (–)-1-phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Synthesis and x-ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane, 385–90
Structure and protonation study of the imidazo[2,1-b]-1,3,4-thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6-dimethylimidazo[2,1-b]-1,3,4-thiadiazole and its hydrobromide, 421–6
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
X-ray crystallographic study of the preferred conformations of 2,6- and 3,5-dimethyl-1,4-dihydrobenzoic acids, 471–5
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three-electron-bond R_2SX radicals in aqueous solutions, 758–62
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9-methyl-3,7-diphenyl-1,3,4,6,7,9-hexaaza-5γ^4-phosphabicyclo[3.3.1]nonane-5-thione, 792–5
Kinetics of sulfodeacylation of dimesityl ketone: a dual-path sequence of first-order reactions, 835–7
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1-(p-methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
The radical ions of 4,5,7,8-tetramethyl[2.2]paracyclophane, 1045–50
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl-enzyme of methylchymotrypsin. Efficiency of acid-base catalysis, 1067–74
Gas-phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas-phase thermolysis of a thioketene S-oxide, 1206–11
Conformation and reactivity. Part 9. Kinetics of the acid- or base-catalyzed methanolysis of the methyl esters of trans-decalin- or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2-chloro-2-methyl-1-phenylpropane in 50% v/v ethanol-water, 1228–33
Chemical reactivity and electronic structure of N-methyl derivatives of xanthine, 1293–6
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Determination of a new scale of ortho-steric parameters S^0 from N-methylation of pyridines, 1350–5
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
An empirical determination of carbon-13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
The thermal ring opening of 3,3-disubstituted cyclobutenes, 1391–8
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta-1,5-dienes sensitized by aromatic ester, 1678–82
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo-silanes and -germanes, 1690–5
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9
METHYLACETAMIDE
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
METHYLADAMANTYL
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α-methyl/hydrogen rate ratios in hexafluoropropan-2-ol-water, 1244–52
METHYLAMINO
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
METHYLAMINOCARBONYL
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
METHYLAMINOCARBONYLGLYCINE
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
METHYLAMINOIMIDAZOLINONE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
METHYLAMINONAPHTHALENE
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
METHYLAMINOPROPANE
The crystal and molecular structure of 1,3-bis(thiocarbamoyl)-2-N,N-dimethylaminopropane hydrochloride (Cartap), 1805–8
METHYLAMMONIO
The kinetics of hydrolysis of N-trimethylammonioacetamide and of substituted N-trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
METHYLAMMONIOBENZAMIDE
The kinetics of hydrolysis of N-trimethylammonioacetamide and of substituted N-trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
METHYLAMMONIUM
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Stereochemistry of photosolvolysis of (–)-1-phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
METHYLANILINIUM
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid-catalyzed reaction, 632–6
The kinetics of hydrogen-isotope exchange at the nitrogen atom of

METHYLANILINIUM(contd)
substituted anilinium ions. Part 2. The nitrosonium–ion–catalyzed reaction, 637–40
METHYLANTHRACENE
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
Aromatic sulfonation. Part 79. Sulfonation of some (poly)–methylanthracenes with dioxane–sulfur trioxide complex in dioxane, 911–14
METHYLATION
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
METHYLBENZALDEHYDE
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
METHYLBENZENE
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5–tetramethylbenzene, naphthalene, and 1,6–methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
METHYLBENZENEDICARBOXALDEHYDEBISTOLYLSULFONYLHYDRAZONE
Crystal structure of a 1:2 channel inclusion adduct of 5–methylbenzene–1,3–dicarboxaldehyde bis–(p–tolylsulfonylhydrazone) and benzene, 672–5
METHYLBENZOPHENONE
Kinetics of sulfodeacylation of dimesityl ketone: a dual–path sequence of first–order reactions, 835–7
METHYLBENZYL
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
METHYLBENZYLIDENEMETHYLAMINE
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
METHYLBURIMAMIDE
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
METHYLBUTENE
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30
METHYLCHYMOTRYPSIN
Mechanism of chymotrypsin: concurrent chemical and enzymic aminolysis of an acyl–enzyme of methylchymotrypsin. Efficiency of acid–base catalysis, 1067–74
METHYLCYCLOBUTENE
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
METHYLCYCLOHEXANE
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
METHYLCYCLOPROPYL
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
METHYLCYCLOPROPYLACETIC
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas–phase decarboxylation of cyclopropylacetic acids, 553–6
METHYLCYSTEINE
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
METHYLDIHYDROBENZOIC
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
METHYLDIHYDROOXAZINE
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
METHYLDIPHENYLHEXAAZAPHOSPHABICYCLONONANETHIONE
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5λ⁴–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
METHYLENE
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
METHYLENECYCLOALKANE
Conformation of α–substituted cycloalkyl radicals, 1761–3
METHYLENECYCLOALKYL
Allylic radicals from methylenecycloalkanes, 1063–6
METHYLENECYCLOBUTYL
Allylic radicals from methylenecycloalkanes, 1063–6
METHYLENECYCLOHEXYL
Allylic radicals from methylenecycloalkanes, 1063–6
METHYLENECYCLOPENTYL
Allylic radicals from methylenecycloalkanes, 1063–6
METHYLENECYCLOPROPYL
Allylic radicals from methylenecycloalkanes, 1063–6
METHYLHEXENONE
Photochemistry of acylic βγ–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
METHYLHYDRAZINOETHANETHIOL
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4–dimethyl–, 2,3,4–trimethyl–, and 2,2,3,4–tetramethyl–1–thia–3,4–diazacyclohexanes, 279–85
METHYLHYDRODIAZEPINIUM
Diazepines. Part 24. Crystal and molecular structure of 2,3–dihydro–5,7–dimethyl–1,4–diazepinium perchlorate, 74–6
METHYLIDE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
METHYLIDENENAPHTHALENE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
METHYLIMIDAZOLIDINEDIONE
Kinetics and mechanism of cyclization of N–(methylaminocarbonyl)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
METHYLIMIDAZOTHIADIAZOLE
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
METHYLNITRONAPHTHALENE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
METHYLNITROSOANILINE
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
METHYLNITROSOPROPANE
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
METHYLOXADIAZOLYL
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
METHYLPARACYCLOPHANE
The radical ions of 4,5,7,8–tetramethyl[2.2]paracyclophane, 1045–50
METHYLPENTANAL
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl–substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
METHYLPEROXYL
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30

METHYLPHENYLPHOSPHOLENE
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4-dimethyl-1-phenyl-3-phospholene. Phosphinothioylidene, 1017–21
METHYLPHENYLPROPANE
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2-chloro-2-methyl-1-phenylpropane in 50% v/v ethanol–water, 1228–33
METHYLPIPERIDYL
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl-amides and -amidines, 717–23
METHYLPROPENYL
High-pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
METHYLPYRROLE
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
METHYLQUINOLINE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
METHYLQUINOLONE
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
METHYLSTYRENE
Reactions of palladium(II) with organic compounds. Part 5. Effect of reaction conditions upon products of oxidation of α-methylstyrene, 1099–104
METHYLSULFONIUM
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
METHYLSULFONYLCYCLOHEXENONE
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron-deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5-dimethyl-3-methylsulfonylcyclohex-2-enone, 1166–9
METHYLTETRAAZAPERHYDROPYRENE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
METHYLTETRAAZATRICYCLOHEXADECANE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
METHYLTHIADIAZACYCLOHEXANE
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
METHYLTHIOCARBONYLCYCLOHEXANE
Gas-phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas-phase thermolysis of a thioketene S-oxide, 1206–11
METHYLTHIOSULFONIUM
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
METHYLTOLUIDINIUM
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
METHYLTRIAZENE
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
METHYLUREA
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1-methylurea, and 1,3-dimethylurea with benzil in acid solution, 103–5
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with 1-phenylpropane-1,2-dione in acid solution, 106–9
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with acetophenone in acid solution, 229–31
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
METHYLVINYLCYCLOHEXENE
An empirical determination of carbon-13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
METHYLXANTHINE
Chemical reactivity and electronic structure of N-methyl derivatives of xanthine, 1293–6
METHYLXYLIDINIUM
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid-catalyzed reaction, 632–6
METIAMIDE
An infrared study of intramolecular hydrogen-bonding in the histamine H_2-receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
MICELLE
Kinetics of the reversible hydration of 1,3-dichloroacetone catalyzed by aerosol-OT-solubilized acids and bases in carbon tetrachloride, 127–31
Coenzyme models. Part 24. Micellar catalysis of flavin-mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N-acyl-L-histidine in micelles, 1483–7
Aggregation behavior of synthetic peptide surfactants, 1809–15
MICHAEL
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with acetophenone in acid solution, 229–31
MINDO
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
MIXED
Keto-enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
MNDO
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
MO
Ring asymmetry in 4-morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
Oxathiiranes. Part 5. Oxathiirane O-oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α-cholest-2-eno[3,2-b]pyridine, 598–602
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-dihydro-2,2-diphenylquinoline 1-oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
Chemical reactivity and electronic structure of N-methyl derivatives of xanthine, 1293–6
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
Photochemical substitution of amino- and hydroxy-anthraquinones, 1544–8
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
Ab initio calculations and photoelectron spectra of cyclic oxamides 1815–21
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
MOL
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and $NN'O^{-2}H_5$ derivatives, 395–400

MOL(contd)
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2–hydroxypyridines, 620–3
The structure and absolute configuration of (–)–2β,9α–dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x–ray analysis of the mono–p–bromobenzoate, 763–7
Crystal and molecular structure of 2α–bromo–α–tetrahydrosantonin 1116–18
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron–deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5–dimethyl–3–methylsulfonylcyclohex–2–enone, 1166–9
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
Conformational studies. Part 13. Proton NMR and x–ray analyses of 2β–bromo–3α–hydroxy–5α–pregnane–11,20–dione, 3α–hydroxy–2β–methoxy–5α–pregnane–11,20–dione, and 3α–hydroxy–2α–methyl–5α–pregnane–11,20–dione, 1176–82
Conformational studies. Part 14. An x–ray analysis of 6α–hydroxy–4,4–dimethylandrostan–3–one, 1183–5
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,–26,29–heptaoxa[7^{3,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
Thermochemistry of bridged–ring substances. Enthalpies of formation of diamantan–1–, –3–, and –4–ol and of diamantanone 1686–9
Aggregation behavior of synthetic peptide surfactants, 1809–15
MOLYBDENUM
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
MONOIMINE
Activation parameters and mechanism of the deamination of N–substituted quinone monoimines and diimines, 1601–5
MONOXIDE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
MORPHOLINE
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7
MORPHOLINO
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
MORPHOLINOBENZAMIDOXIME
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
MORPHOLINOBENZENEDIAZONIUM
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
MORPHOLINODIHYDROTHIOPHENE
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7
MORPHOLINONITROBENZAMIDOXIME
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
MORPHOLINOPHENYL
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
MULTIVARIATE
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
MUMM
The isoimide–imide rearrangement, 121–6
MUTAROTENONE
A study on the electrochemical reduction mechanism of rotenone, 1277–81
MYOINOSITOL
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
NAPHTHALENE
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5–tetramethylbenzene, naphthalene, and 1,6–methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
The interpretation of quantitative linear correlations. Substituent effects on the properties of naphthalene and its derivatives, 330–8
Protonation equilibriums of 1–arylazo–4–naphthols and 1–arylazo–4–methoxynaphthalenes, 628–31
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,–26,29–heptaoxa[7^{3,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8–bis(dimethylamino)naphthalene (proton sponge), 1832–9
NEOPENTANE
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
NEUROMUSCULAR
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
NICOTINAMIDE
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
NICOTYRINE
Identification of the product from nicotine and sulfur as bis–1–methyl–2–(3–pyridyl)pyrrol–3–yl disulfide, 326–9
NITRATION
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
Substitution reactions of phenylated aza–heterocycles. Part 1. Nitration of 2,5–diphenyl–1,3,4–oxadiazole: a product study using high performance liquid chromatography, 773–7
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2– and 4–isopropyltoluene, 1–chloro–4–isopropylbenzene, 4–isopropylanisole, and 2–bromotoluene: nitrodeisopropylation, 1606–16
The mechanism of nitrosation of 4–nitrophenol with aqueous nitrous acid, 1783–7
NITRENE
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4–tert–butylthiane, 385–90
NITRILE
Nitrile–forming eliminations from oxime ethers, 1313–17
NITRO
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
NITROALKANE
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
NITROANILINE
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
The stabilities of Meisenheimer complexes. Part 22. The ionization

NITROANILINE(contd)
of 2,4-dinitroaniline, its N-alkylated derivatives, and 2,6-dinitroaniline in methanol–dimethyl sulfoxide containing sodium methoxide, 1854–8
NITROANILINOISOUREA
Competing acyl transfer and intramolecular oxygen -> nitrogen acyl group migration from an isolable O-acylisourea, 867–75
NITROBENZAMIDOXIME
Reaction of 1,3-dipoles in aqueous solution. 5. Structural studies on isolable (E)- and (Z)-NN-disubstituted amidoximes. Crystal and molecular structure of (E)-morpholino-p-nitrobenzamidoxime, 704–9
NITROBENZENE
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
NITROBENZENEDIAZONIUM
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
NITROBENZYL
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N-chlorobenzenesulfonamide, 676–8
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6-trinitrotoluene and 2,4,6-trinitrobenzyl chloride, 1850–3
NITROBENZYLPHENYLPHOSPHONIABICYCLOOCTANE
The synthesis, stereochemistry, and crystal structure of exo-3-p-nitrobenzyl-endo-3-phenyl-3-phosphoniabicyclo[3.2.1]octane bromide, 1467–72
NITROETHANE
Coenzyme models. Part 24. Micellar catalysis of flavin-mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
NITROGEN
Nuclear magnetic resonance studies of N-nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
The mechanism of cyclization of 1,4-diaryl-1-azido-2,3-diazabuta-1,3-dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl-amides and -amidines, 717–23
An investigation into the structure and conformation of N-(4-bromophenyl)maleimide-^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Inversion of trivalent nitrogen: application of the MNDO and MINDO/3 semiempirical molecular orbital methods, 1512–15
NITRONAPHTHALENE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
NITRONATE
The structures of nitronate salts in solution as determined by carbon-13 and proton NMR spectroscopy, 731–6
NITROPHENOL
The mechanism of nitrosation of 4-nitrophenol with aqueous nitrous acid, 1783–7
NITROPHENYLFORMAMIDINE
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1-(N-tert-butylformimidoyl)imidazole and related imidazole-containing formamides, 1318–25
NITROPHENYLHYDRAZONE
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
NITROPHENYLPHOSPHINAMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
NITROPROPANE
Kinetic deuterium solvent isotope effects in the pyridine-catalyzed iodination of 2-nitropropane in aqueous and methanolic solutions, 1421–4
NITROSAMINE
Nuclear magnetic resonance studies of N-nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
NITROSATION
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
The mechanism of nitrosation of 4-nitrophenol with aqueous nitrous acid, 1783–7
NITROSO
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
Nuclear magnetic resonance studies of N-nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S-methylcysteine, and methionine towards N-methyl-N-nitrosoaniline in acid solution, 624–7
NITROSOANILINE
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
NITROSOBUTANE
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
NITROSOMETHYLUREA
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
NITROSONIUM
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
NITROTHIOPHENE
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Reaction of 2,5-dimethyl-3,4-dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5-dimethyl-trans-2,3-dimorpholino-4-nitro-2,3-dihydrothiophene, 1764–7
NITROTOLUENE
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6-trinitrotoluene and 2,4,6-trinitrobenzyl chloride, 1850–3
NITROUS
Hydroxyl radical-induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
The mechanism of nitrosation of 4-nitrophenol with aqueous nitrous acid, 1783–7
NITROXIDE
Homosolvolysis, 260–6
Stereoselective reduction of indoline nitroxide radicals, 710–13
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
NMR
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
The reduction of fluorine-containing triarylmethanols by formic acid, 96–102
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
3-Carboxymethylthio-1,5-diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
Conformational studies on 5-formyl-5,6,7,8-tetrahydrofolic acid (folinic acid) using proton and carbon-13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer

NMR(contd)
adducts as reaction intermediates, 243–9
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon–13 magnetic resonance spectroscopy, 255–9
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4–dimethyl–, 2,3,4–trimethyl–, and 2,2,3,4–tetramethyl–1–thia–3,4–diazacyclohexanes, 279–85
Tetrahedral intermediates. Part 1. The generation and characterization of some hemiorthoesters, 300–5
The torsional barrier in aromatic carbonyl compounds, 363–9
Structure and protonation study of the imidazo[2,1–b]–1,3,4–thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6–dimethylimidazo[2,1–b]–1,3,4–thiadiazole and its hydrobromide, 421–6
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
X–ray crystallographic study of the preferred conformations of 2,6– and 3,5–dimethyl–1,4–dihydrobenzoic acids, 471–5
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Acid–induced carbon–13 NMR chemical–shift changes of alcohol carbon atoms, 544–9
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Stereoselective reduction of indoline nitroxide radicals, 710–13
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
An investigation into the structure and conformation of N–(4–bromophenyl)maleimide–^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
A proton nuclear magnetic resonance study of the deprotonation of L–dopa and adrenaline, 1105–10
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
Conformational studies. Part 13. Proton NMR and x–ray analyses of 2β–bromo–3α–hydroxy–5α–pregnane–11,20–dione, 3α–hydroxy–2β–methoxy–5α–pregnane–11,20–dione, and 3α–hydroxy–2α–methyl–5α–pregnane–11,20–dione, 1176–82
A proton nuclear magnetic resonance study of the interactions of vancomycin with N–acetyl–D–alanyl–D–alanine and related peptides, 1262–70
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1–phenylethyl sulfoxides, 1306–12
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
Solid–state and solution structures of fluorocholine and some analogs: nuclear magnetic resonance and x–ray studies, 1415–18
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
A conformational study of the 3–p–tolylsulfonylbutan–2–ol and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
NONBONDING
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
NOPINONE
Base–catalyzed deuterium exchange reactions of 6,6–dimethyl–2–methylenebicyclo[3.1.1]heptane [pin–2(10)–ene] and 6,6–dimethylbicyclo[3.1.1]heptan–2–one (nopinone), 530–4
NORANDROSTANONE
Conformational studies. Part 12. The crystal and molecular structure of 17β–iodoacetoxy–4,4–dimethyl–19–nor–5α–androstan–3–one and of 17β–iodoacetoxy–4,4–dimethyl–5α–androstan–3–one, 1170–5
NORBORNANE
Hydroxy–group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide. Some comments on the mechanism of catalysis by serine proteases, 1131–6
NORBORNANECARBOXYLATE
Conformation and reactivity. Part 9. Kinetics of the acid– or base–catalyzed methanolysis of the methyl esters of trans–decalin– or cyclohexanecarboxylic acid and related acids. The validity of Taft's method for the separation of polar, steric, and resonance effects, 1212–18
NORBORNYL
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
NORBORNYLMETHANE
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
NORRISH
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
NORTRICYCLENE
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
NUCLEAR
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
NUCLEOPHILE
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
NUCLEOPHILIC
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer

NUCLEOPHILIC(contd)
adducts as reaction intermediates, 243–9
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
NUCLEOSIDE
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
NUCLEOTIDE
Proton transfer from heterocyclic compounds. Part 10. Adenine mono– and polynucleotides, 441–6
OCTYL
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
OIL
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
OLIGOMERIZATION
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
OLIGOPEPTIDE
A proton nuclear magnetic resonance study of the interactions of vancomycin with N–acetyl–D–alanyl–D–alanine and related peptides, 1262–70
OPENING
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas–phase decarboxylation of cyclopropylacetic acids, 553–6
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
OT
Kinetics of the reversible hydration of 1,3–dichloroacetone catalyzed by aerosol–OT–solubilized acids and bases in carbon tetrachloride, 127–31
OVERHAUSER
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
OXA
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
Conformational analysis of saturated heterocycles. Part 100. 1–Oxa–3–azacyclohexanes, 1739–45
OXAAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 100. 1–Oxa–3–azacyclohexanes, 1739–45
OXADIAZADECALIN
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
OXADIAZOLE
Substitution reactions of phenylated aza–heterocycles. Part 1. Nitration of 2,5–diphenyl–1,3,4–oxadiazole: a product study using high performance liquid chromatography, 773–7
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
OXADIAZOLECARBOXAMIDE
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
OXADIAZOLECARBOXYLATE
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N–alkyl– or N–phenyl–substituted 5–amino–1,3,4–oxadiazole–2–carboxylic acids, 1627–30
OXAHEXENOL
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
OXAMIDE
Ab initio calculations and photoelectron spectra of cyclic oxamides 1815–21
OXATHIIRANE
Oxathiiranes. Part 5. Oxathiirane O–oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
OXATRIAZOLE
Mesoionic compounds. Part 7. Acid catalyzed hydrolysis of ethyloxatriazole, 1437–40
OXAZINE
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
OXIDE
Oxathiiranes. Part 5. Oxathiirane O–oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstituted indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
Dissociation constants of the cyanohydrins of some substituted thian–4–ones, 714–16
Photochemistry of some azaphenanthrene N–oxides, 1159–61
Gas–phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas–phase thermolysis of a thioketene S–oxide, 1206–11
Aggregation of 4–substituted pyridine N–oxide–trifluoroacetates in benzene, 1516–19
OXIDN
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Oxidation of thiols and disulfides with the ammoniumyl radical cation: an ESR investigation, 191–7
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
Stereoselective reduction of indoline nitroxide radicals, 710–13

OXIDN(contd)
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three-electron-bond R_2SX radicals in aqueous solutions, 758–62
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N-hydroxy- and N-alkoxyureas, 1022–7
Reactions of palladium(II) with organic compounds. Part 5. Effect of reaction conditions upon products of oxidation of α-methylstyrene, 1099–104
Coenzyme models. Part 24. Micellar catalysis of flavin-mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
A study of the aerial oxidation of L-cysteinyl-L-cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
Oxidation by singlet oxygen of 2-(2-quinolyl)indan-1,3-dione, 1569–72
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta-1,5-dienes sensitized by aromatic ester, 1678–82
OXIME
Nitrile-forming eliminations from oxime ethers, 1313–17
Formation and thermal reaction of O-(N-acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5-disubstituted 1,2,4-oxadiazoles from O-acetylarylamidoximes and O-aroylacetamidoximes, 1792–9
OXONIUM
Ion-dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
OXOPHENYLHYDROINDOLE
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-dihydro-2,2-diphenylquinoline 1-oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
OXYACANTHINE
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
OXYGEN
Oxathiiranes. Part 5. Oxathiirane O-oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
Oxidation by singlet oxygen of 2-(2-quinolyl)indan-1,3-dione, 1569–72
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
OXYL
Stereoselective reduction of indoline nitroxide radicals, 710–13
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-dihydro-2,2-diphenylquinoline 1-oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
PAIR
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
A theoretical investigation on the energy and structure of ion-molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α-methyl/hydrogen rate ratios in hexafluoropropan-2-ol-water, 1244–52
Indolyl alkali-metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
An electron spin resonance investigation of the reduction of o-diaroylbenzenes by Group III metals, 1788–91
PAIRING
Ion pairing of 1,5-diarylpentadienyl carbanions, 1137–40
PAIRS
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl-stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
PALLADIUM
Reactions of palladium(II) with organic compounds. Part 5. Effect of reaction conditions upon products of oxidation of α-methylstyrene, 1099–104
PARACYCLOPHANE
The radical ions of 4,5,7,8-tetramethyl[2.2]paracyclophane, 1045–50
Macrocyclic enzyme models. A metallo[10.10]paracyclophane bearing two imidazolyl groups as an efficient, bifunctional catalyst for ester hydrolysis, 1665–71
PARTICIPATION
Hydroxy-group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
PENICILLIN
Metal-ion catalyzed hydrolysis of some β-lactam antibiotics, 1725–32
PENTADIENE
Photochemistry of α-substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
PENTANAL
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl-substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
PENTANE
On the active species of aluminum(III) bromide-copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5
PENTENE
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
PENTENONE
Photochemistry of acylic βγ-unsaturated ketones. Part 4. The effect of α-methyl substitution with some hex-4-en-2-ones and 1-phenylpent-3-en-1-ones, 592–7
PENTYL
Ion-dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
PENTYLETHYLIDENEOXONIUM
Ion-dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
PEPTIDE
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N-acetylhistidine, and histidine-containing peptides, 447–51
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
A proton nuclear magnetic resonance study of the interactions of vancomycin with N-acetyl-D-alanyl-D-alanine and related peptides, 1262–70
The crystal structure of pivaloyl-D-prolyl-L-prolyl-L-alanyl-N-methylamide, 1800–4
Aggregation behavior of synthetic peptide surfactants, 1809–15
PERCHLORATE
Diazepines. Part 24. Crystal and molecular structure of 2,3-dihydro-5,7-dimethyl-1,4-diazepinium perchlorate, 74–6
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl-stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
PERCHLORIC
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
PERFLUOROCARBON
Photolysis of butane-2,3-dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
PERHYDRO
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene-n-heptane system 1406–10
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1-

PERHYDRO(contd)
ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
PERHYDRODIBENZOCROWN
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
PERHYDROPYRIDOBENZOXAZINE
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1–ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2–c][1,3]oxazine, 1778–82
PERHYDROTRIPHENYLENE
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
PERHYDROTRIPTYCENE
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
PERIODATE
Mechanism of the periodate oxidation of ethane–1,2–diamine, NN'–dimethylethane–1,2–diamine and 2–aminoethanol, 39–45
PEROXIDASE
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
PEROXIDE
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Evidence for the formation of thermally unstable dialkyl trioxide molecules using electron spin resonance spectroscopy, 981–4
PEROXO
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
PEROXODIPHOSPHATE
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
PEROXYL
Reactions of oxygenated radicals in the gas phase. Part 5. Reactions of methylperoxyl radicals and alkenes, 65–7
PESTICIDE
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
PHASE
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
PHENALENE
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
PHENALENETHIONE
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
PHENALENONE
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
PHENETHYL
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
PHENOL
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ– constants of 2–selenienyl and 2–tellurienyl groups, 971–5
A proton nuclear magnetic resonance study of the deprotonation of L–dopa and adrenaline, 1105–10
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
PHENOLYSIS
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
PHENOTHIAZINE
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
PHENOXAZINE
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
PHENYL
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω–phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side–chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with 1–phenylpropane–1,2–dione in acid solution, 106–9
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Photochemistry of acylic βγ–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1–(substituted–aryl)butadienes. A ground–state substituent effect on an excited–state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
On the reaction between potassium ethoxide and 3–amino–4–benzoylfurazan: the crystal structure of the intermediate, 5–phenyl–1,2,4–oxadiazole–3–carboxamide, 1096–8
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
The electrochemical reduction of the 6–phenyl–2,3–dihydro–1,4–diazepinium cation and its 1–methyl and 5–methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
PHENYLACETATE
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
PHENYLACRYLIC
The dissociation constants of the E– and Z–αβ–diarylacrylic acids, 161–4
PHENYLALANYLHYDANTOIN
Carbon–13 nuclear magnetic resonance studies on the conformation

PHENYLALANYLHYDANTOIN(contd)
of substituted hydantoins, 1573–7
PHENYLALLYL
Organic anions. Part 6. Thermal and photochemical interconversion of (E,E)- and (E,Z)-diphenylallyl anions, 1419–20
PHENYLATION
Photoreduction and photoarylation of O-ethyl S-n-propyl phenylphosphonothioate, 198–205
PHENYLAZO
Protonation equilibriums of 1-arylazo-4-naphthols and 1-arylazo-4-methoxynaphthalenes, 628–31
PHENYLAZOMETHOXYNAPHTHALENE
Protonation equilibriums of 1-arylazo-4-naphthols and 1-arylazo-4-methoxynaphthalenes, 628–31
PHENYLAZONAPHTHOL
Protonation equilibriums of 1-arylazo-4-naphthols and 1-arylazo-4-methoxynaphthalenes, 628–31
PHENYLBUTADIENE
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1-(substituted-aryl)butadienes. A ground-state substituent effect on an excited-state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
PHENYLBUTANOIC
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl-1,4-benzoquinones in solution, 860–6
PHENYLBUTANOL
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
PHENYLDIHYDRODIAZEPINIUM
Electrochemical reduction of the 5,7-diphenyl-2,3-dihydro-1,4-diazepinium cation, 668–71
The electrochemical reduction of the 6-phenyl-2,3-dihydro-1,4-diazepinium cation and its 1-methyl and 5-methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
PHENYLDIHYDROOXAZINE
The conformational equilibriums in a cyclohexene-like system: 3,6-dihydro-1,2-oxazine, 550–2
PHENYLETHANOL
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
PHENYLETHYL
Stereochemistry of photosolvolysis of (–)-1-phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1-phenylethyl sulfoxides, 1306–12
PHENYLETHYLTRIMETHYLAMMONIUM
Stereochemistry of photosolvolysis of (–)-1-phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
PHENYLFORMAMIDINE
Formimidoyl group transfer from activated amidines. Part 1. Hydrolysis of 1-(N-tert-butylformimidoyl)imidazole and related imidazole-containing formamides, 1318–25
PHENYLFORMAZAN
3-Carboxymethylthio-1,5-diphenylformazan: a potential terdentate ligand with unusual properties, 139–45
PHENYLHEPTATRIENE
Ion pairing of 1,5-diarylpentadienyl carbanions, 1137–40
PHENYLHEXAAZAPHOSPHABICYCLONONANETHIONE
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9-methyl-3,7-diphenyl-1,3,4,6,7,9-hexaaza-5γ^4-phosphabicyclo[3.3.1]nonane-5-thione, 792–5
PHENYLHYDRAZONE
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
PHENYLHYDROINDOLE
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-dihydro-2,2-diphenylquinoline 1-oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
PHENYLHYDROQUINOLINE
Crystal and molecular structure of the N-oxyl radicals 1,2-dihydro-3-oxo-2,2-diphenyl-3H-indole 1-oxyl and 1,2-dihydro-2,2-diphenylquinoline 1-oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
PHENYLINDOLINE
Stereospecific reduction of 3-hydroxy-3H-indoles and of their corresponding N-oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1-hydroxy-2,3-disubstituted indoles. Crystal and molecular structure of 3-hydroxy-2,3-diphenylindoline, 339–46
PHENYLMALEIMIDE
An investigation into the structure and conformation of N-(4-bromophenyl)maleimide-^{15}N by proton nuclear magnetic resonance spectroscopy of liquid crystalline solutions, 816–18
PHENYLMETHANOL
The reduction of fluorine-containing triarylmethanols by formic acid, 96–102
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N-chlorobenzenesulfonamide, 676–8
PHENYLMETHYLPHOSPHONIUM
Synthesis and x-ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
PHENYLNONATETRAENE
Ion pairing of 1,5-diarylpentadienyl carbanions, 1137–40
PHENYLOXADIAZOLE
Substitution reactions of phenylated aza-heterocycles. Part 1. Nitration of 2,5-diphenyl-1,3,4-oxadiazole: a product study using high performance liquid chromatography, 773–7
PHENYLOXADIAZOLECARBOXAMIDE
On the reaction between potassium ethoxide and 3-amino-4-benzoylfurazan: the crystal structure of the intermediate, 5-phenyl-1,2,4-oxadiazole-3-carboxamide, 1096–8
PHENYLPENTENONE
Photochemistry of acylic $\beta\gamma$-unsaturated ketones. Part 4. The effect of α-methyl substitution with some hex-4-en-2-ones and 1-phenylpent-3-en-1-ones, 592–7
PHENYLPHOSPHINAMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
PHENYLPHOSPHINO
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para-quinones, 225–8
PHENYLPHOSPHINOSELENOYLETHANE
A study of the inclusion properties of 1,2-bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
PHENYLPHOSPHONOTHIOATE
Photoreduction and photoarylation of O-ethyl S-n-propyl phenylphosphonothioate, 198–205
PHENYLPHOSPHORANYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
PHENYLPROPANE
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2-chloro-2-methyl-1-phenylpropane in 50% v/v ethanol–water, 1228–33
PHENYLPROPANEDIONE
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with 1-phenylpropane-1,2-dione in acid solution, 106–9
PHENYLPROPANOL
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
PHENYLPYRIDYLCYCLOPROPANE
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
PHENYLSILYL
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para-quinones, 225–8
PHENYLSTANNANE
Ring-opening of some radicals containing the cyclopropylmethyl system, 1473–82

PHENYLSULFONYLCYCLOHEXENONE
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron–deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5–dimethyl–3–methylsulfonylcyclohex–2–enone, 1166–9
PHENYLTRIAZENE
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
PHOSPHA
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ^4–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
PHOSPHABICYCLONONANETHIONE
Heterocyclic compounds containing phosphorus. Part 34. Crystal and molecular structure of 9–methyl–3,7–diphenyl–1,3,4,6,7,9–hexaaza–5γ^4–phosphabicyclo[3.3.1]nonane–5–thione, 792–5
PHOSPHATE
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
PHOSPHINATE
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
PHOSPHINE
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
PHOSPHINIC
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
PHOSPHINO
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
PHOSPHINOSELENOYLETHANE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
PHOSPHINOTHIOIC
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
PHOSPHOLENE
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4–dimethyl–1–phenyl–3–phospholene. Phosphinothioylidene, 1017–21
PHOSPHONIA
The synthesis, stereochemistry, and crystal structure of exo–3–p–nitrobenzyl–endo–3–phenyl–3–phosphoniabicyclo[3.2.1]octane bromide, 1467–72
PHOSPHONIABICYCLOOCTANE
The synthesis, stereochemistry, and crystal structure of exo–3–p–nitrobenzyl–endo–3–phenyl–3–phosphoniabicyclo[3.2.1]octane bromide, 1467–72
PHOSPHONIUM
Synthesis and x–ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
PHOSPHONOTHIOATE
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
PHOSPHONYL
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
PHOSPHORANYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
PHOSPHORESCENCE
Luminescence characteristics of thiamine derivatives, 1288–92
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
PHOSPHORODITHIOATE
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16
PHOSPHORYL
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
PHOSPHORYLETHANOLAMINE
Mechanism of hydrolysis of phosphorylethanolamine diesters. Intramolecular nucleophilic amine participation, 373–9
PHOTOCHEM
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
Photochemistry of acylic $\beta\gamma$–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
Photochemistry of o–phthalaldehyde, 724–30
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1–(substituted–aryl)butadienes. A ground–state substituent effect on an excited–state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4–dimethyl–1–phenyl–3–phospholene. Phosphinothioylidene, 1017–21
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
Photochemistry of some azaphenanthrene N–oxides, 1159–61
Radical reactions of bicyclo[2.1.0]pentane, 1366–71
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
PHOTODEGRDN
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
PHOTOELEC
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
PHOTOELECTRON
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
Investigation of the electronic structure of 2–(acetylamino)prop–2–enoic acid (N–acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
Ab initio calculations and photoelectron spectra of cyclic oxamides 1815–21
PHOTOISOMERIZATION
Photochemistry of some azaphenanthrene N–oxides, 1159–61
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
PHOTOLYSIS
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethyla-

PHOTOLYSIS(contd)
mmonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
The mechanism of photolysis of benzyl halides and benzyl acetate in alcohols, 87–90
Laser flash photolysis of aromatic azo–hydrazone systems, 286–90
Photochemistry of acylic βγ–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Photolysis of butane–2,3–dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
Model experiments relevant to the mechanism of adenosylcobalamin–dependent–diol dehydrase: further investigations of isomerizations of dihydroxyalkyl radicals, 961–70
Evidence for the formation of thermally unstable dialkyl trioxide molecules using electron spin resonance spectroscopy, 981–4
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6

PHOTOOXIDN
Photoinduced oxidation of benzoic acid with aqueous hydrogen peroxide, 616–19
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72

PHOTOREDN
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205

PHOTOSENSITIZED
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62

PHOTOSENSITIZER
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62

PHOTOSOLVOLYSIS
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6

PHTHALALDEHYDE
Photochemistry of o–phthalaldehyde, 724–30

PHTHALIMIDE
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61

PI
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70

PICRAMIDE
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ–complex formation in the reactions of N–substituted 2,4,6–trinitroanilines (picramides) with sodium methoxide in methanol, 752–7

PICRYL
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4–Substituted and 3,4–disubstituted anilines, 832–4

PINENE
Base–catalyzed deuterium exchange reactions of 6,6–dimethyl–2–methylenebicyclo[3.1.1]heptane [pin–2(10)–ene] and 6,6–dimethylbicyclo[3.1.1]heptan–2–one (nopinone), 530–4

PIPERIDINE
Base catalysis in the reactions between 2–fluoro–6–nitrobenzothiazole and aliphatic amines in benzene, 313–16
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7

PIPERIDINIUM
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6

PIPERIDINODIHYDROTHIOPHENE
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7

PIPERIDYL
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23

PIVALOYL
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504

PIVALOYLBENZOQUINONE
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6

PIVALOYLMETHANE
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62

PK
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)–substituent effects with acid strength, 515–22

PMO
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25

POLAR
First thermodynamic dissociation constants of 5,5–disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)–substituent effects with acid strength, 515–22
An approach for assessing the relative importance of field and σ inductive contributions to polar substituent effects based on the nonproportionality of field and σ inductive substituent constants 985–92

POLAROG
Electrochemical formation of dianions from unsaturated cyclophanes 1301–5

POLYA
Proton transfer from heterocyclic compounds. Part 10. Adenine mono– and polynucleotides, 441–6

POLYENE
Ion pairing of 1,5–diarylpentadienyl carbanions, 1137–40

POLYHALO
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80

POLYMETHYL
Aromatic sulfonation. Part 79. Sulfonation of some (poly)–methylanthracenes with dioxane–sulfur trioxide complex in dioxane, 911–14

PORPHYRIN
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2

POSITION
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51

POTENTIAL
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl-1,4-benzoquinones in solution, 860–6
On the chirality of 2-hydroxy-N,N-dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)-β-ionone and its isomeric α-pyran. Evidence for exciplex formation between the α-pyran and fluoren-9-one, 1057–62
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta-1,5-dienes sensitized by aromatic ester, 1678–82
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
Conformational analysis of saturated heterocycles. Part 101. 1,3-Diazacyclohexanes and 1-thia-3-azacyclohexanes, 1746–51
PREGNANEDIONE
Conformational studies. Part 13. Proton NMR and x-ray analyses of 2β-bromo-3α-hydroxy-5α-pregnane-11,20-dione, 3α-hydroxy-2β-methoxy-5α-pregnane-11,20-dione, and 3α-hydroxy-2α-methyl-5α-pregnane-11,20-dione, 1176–82
PRESSURE
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene-n-heptane system 1406–10
High-pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
PROLINE
The crystal structure of pivaloyl-D-prolyl-L-prolyl-L-alanyl-N-methylamide, 1800–4
PROMOTION
A kinetic study of the soft metal ion-promoted hydrolyses of some S-acetals, 1191–200
PROPANE
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2-chloro-2-methyl-1-phenylpropane in 50% v/v ethanol–water, 1228–33
PROPANEDIONE
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1-methylurea, and 1,3-dimethylurea with 1-phenylpropane-1,2-dione in acid solution, 106–9
PROPANOL
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
Conformational analysis of saturated heterocycles. Part 100. 1-Oxa-3-azacyclohexanes, 1739–45
PROPANOYL
An electron spin resonance study of sulfuranyl radicals of the type R_2S–SX [X = CF_3 or R'C(O)], 1497–504
PROPENE
Formation and structure of 1,1-dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
PROPYL
Photoreduction and photoarylation of O-ethyl S-n-propyl phenylphosphonothioate, 198–205
PROPYLIMINIUM
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
PROTEIN
Hydrogen–deuterium exchange of the C-2 protons of histidine and histidine peptides and proteins, 693–9
PROTON
Proton transfer from heterocyclic compounds. Part 10. Adenine mono- and polynucleotides, 441–6
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N-acetylhistidine, and histidine-containing peptides, 447–51
Kinetic deuterium solvent isotope effects in the pyridine-catalyzed iodination of 2-nitropropane in aqueous and methanolic solutions, 1421–4
The stabilities of Meisenheimer complexes. Part 22. The ionization of 2,4-dinitroaniline, its N-alkylated derivatives, and 2,6-dinitroaniline in methanol–dimethyl sulfoxide containing sodium methoxide, 1854–7
PROTONATION
Structure and protonation study of the imidazo[2,1-b]-1,3,4-thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6-dimethylimidazo[2,1-b]-1,3,4-thiadiazole and its hydrobromide, 421–6
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
Protonation equilibriums of 1-arylazo-4-naphthols and 1-arylazo-4-methoxynaphthalenes, 628–31
On the mechanism of protonation of triamines, 900–3
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
The protonation of some 5-substituted thiophene-2-carboxamides, 1721–4
Kinetics and mechanism of cyclization of N-(methylaminocarbonyl)glycine to 3-methylimidazolidine-2,4-dione, 1752–6
Fractionation factors for the aqueous hydroxide ion and solvent isotope effects on the ionization of 1,8-bis(dimethylamino)naphthalene (proton sponge), 1832–9
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl-stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
PYRAN
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)-β-ionone and its isomeric α-pyran. Evidence for exciplex formation between the α-pyran and fluoren-9-one, 1057–62
PYRIDAZINECARBOXYLATE
Ring–chain isomerism of some 4,5-disubstituted pyridazines involving heterospiro compounds, 1339–43
PYRIDINATION
Anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde and its Schiff base derivatives, 347–57
PYRIDINE
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α-cholest-2-eno[3,2-b]pyridine, 598–602
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2-hydroxypyridines, 620–3
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Determination of a new scale of ortho-steric parameters S^0 from N-methylation of pyridines, 1350–5
Kinetic deuterium solvent isotope effects in the pyridine-catalyzed iodination of 2-nitropropane in aqueous and methanolic solutions, 1421–4
Aggregation of 4-substituted pyridine N-oxide–trifluoroacetates in benzene, 1516–19
The use of carbon-13 magnetic resonance chemical shifts and long-range carbon-13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
PYRIDINIUM
Kinetics of hydrolysis and aminolysis of 1-methoxycarbonylpyridinium ions, 741–8
Catalysis by β-glucosidase A_3 of Aspergillus wentii, 1376–83
PYRIDO
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1-ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2-c][1,3]oxazine, 1778–82
PYRIDOBENZOXAZINE
Proton magnetic resonance studies of compounds with bridgehead nitrogen. Part 39. Stereochemistry of perhydropyrido[3,2,1-ij][3,1]benzoxazines and the conformational equilibrium for perhydropyrido[1,2-c][1,3]oxazine, 1778–82
PYRIDONE
Base catalysis in the reactions between 2-fluoro-6-nitrobenzothiaz-

PYRIDONE(contd)
ole and aliphatic amines in benzene, 313–16
PYRIDYL
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
PYRIDYLCYCLOPROPANE
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
PYROLYSIS
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Gas–phase thermolyses. Part 3. Gas–phase thermolysis of silylated thionocarboxylic acid derivatives: a route to thioketenes?, 1557–62
PYRROLE
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
PYRROLECARBOXYLATE
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
PYRROLIDINOBENZAMIDOXIME
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
PYRROLIDINONE
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
PYRROLODIAZEPINE
The electrochemical reduction of the 6–phenyl–2,3–dihydro–1,4–diazepinium cation and its 1–methyl and 5–methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
PYRROLYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
PYRROLYLPHOSPHINE
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
PYRROLYLPHOSPHORANYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
PYRRYLMETHANE
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16
QUATERNIZATION
Determination of a new scale of ortho–steric parameters S^0 from N–methylation of pyridines, 1350–5
QUENCHING
Photochemistry of o–phthalaldehyde, 724–30
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
QUINOL
The crystal structure of the α form of quinol, 641–6
QUINOLINE
Mechanism of reaction of 2–ethoxy–1–ethoxycarbonyl–1,2–dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
QUINOLINIUM
Stereochemistry of photosolvolysis of (–)–1–phenylethyltrimethylammonium iodide in water and in methanol, and nucleophile capture ratios during photosolvolysis of some benzylammonium salts, 83–6
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
QUINOLINODIOXAZOLODIONE
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
QUINOLONE
Alkylation of quinolines with trialkyl phosphates. Part 2. Mechanistic studies, 401–6
QUINOLYL
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
QUINOLYLINDANEDIONE
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
QUINONE
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
Activation parameters and mechanism of the deamination of N–substituted quinone monoimines and diimines, 1601–5
RADICAL
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
Oxidation of thiols and disulfides with the ammoniumyl radical cation: an ESR investigation, 191–7
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
Homosolvolysis, 260–6
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
Formation and structure of 1,1–dialkoxyalkene radical cations in aqueous solution. An in situ electron spin resonance and pulse conductivity study, 883–9
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
The radical ions of 4,5,7,8–tetramethyl[2.2]paracyclophane, 1045–50
Allylic radicals from methylenecycloalkanes, 1063–6
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Oxidation of unsaturated aliphatic and arylalkyl alcohols by

RADICAL(contd)
peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Radical reactions of bicyclo[2.1.0]pentane, 1366–71
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
An electron spin resonance study of sulfuranyl radicals of the type R_2S–SX [X = CF_3 or R'C(O)], 1497–504
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
An electron spin resonance study of side reactions in the equilibriums of formation of triple ions, 1617–21
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
Conformation of α–substituted cycloalkyl radicals, 1761–3
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
The selectivity of attack by the hydroxyl radical on myoinositol, and the importance of stereoelectronic factors upon radical rearrangement: an electron spin resonance conformational–analysis study, 1821–7
RADIOLYSIS
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Hydroxyl radical–induced oligomerization of ethylene in deoxygenated aqueous solution, 391–4
RAMAN
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O–$^2H_5$ derivatives, 395–400
REACTION
Oxathiiranes. Part 5. Oxathiirane O–oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
Rapid acid–catalyzed and uncatalyzed hydration of ketenimines, 579–91
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
The stabilities of Meisenheimer complexes. Part 18. Proton transfer and σ–complex formation in the reactions of N–substituted 2,4,6–trinitroanilines (picramides) with sodium methoxide in methanol, 752–7
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
Reactions of oxygenated radicals in the gas phase. Part 7. Reactions of methylperoxyl radicals and alkenes, 925–30
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
Radical reactions of bicyclo[2.1.0]pentane, 1366–71
Kinetic deuterium solvent isotope effects in the pyridine–catalyzed iodination of 2–nitropropane in aqueous and methanolic solutions, 1421–4
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn\cdot$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin derivatives of butane–2,3–semidione, $R_nCl_{3-n}SnOCMeCMeO\cdot$, 1488–96
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
The protonation of some 5–substituted thiophene–2–carboxamides, 1721–4
Ring–closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
REACTIVITY
Chemical reactivity and electronic structure of N–methyl derivatives of xanthine, 1293–6
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31
REARRANGEMENT
The isoimide–imide rearrangement, 121–6
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl–substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
A new acid–catalyzed rearrangement of thiosulfinates to α–acetylthiosulfoxides in acetic anhydride, 432–40
Competing acyl transfer and intramolecular oxygen → nitrogen acyl group migration from an isolable O–acylisourea, 867–75
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
Rearrangement of radical ipso intermediates by 1,2–shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
Mechanistic studies in the photochemical Fries rearrangement of enol esters, 1659–64
RECEPTOR
An infrared study of intramolecular hydrogen–bonding in the histamine H_2–receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
RECOMBINATION
Photochemistry of α–aryl carboxylic anhydrides. Part 4. Photoreactions of some asymmetrical anhydrides derived from o– and p–methoxyphenylacetic acid, and some of the phenylacetate ester photoproducts, 838–41
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
REDN
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
The reduction of fluorine–containing triarylmethanols by formic acid, 96–102
Photoreduction and photoarylation of O–ethyl S–n–propyl phenylphosphonothioate, 198–205
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Stereospecific reduction of 3–hydroxy–3H–indoles and of their corresponding N–oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1–hydroxy–2,3–disubstitute-

REDN(contd)
d indoles. Crystal and molecular structure of 3–hydroxy–2,3–diphenylindoline, 339–46
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Electrochemical reduction of the 5,7–diphenyl–2,3–dihydro–1,4–diazepinium cation, 668–71
Stereoselective reduction of indoline nitroxide radicals, 710–13
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
A study on the electrochemical reduction mechanism of rotenone, 1277–81
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
The electrochemical reduction of the 6–phenyl–2,3–dihydro–1,4–diazepinium cation and its 1–methyl and 5–methyl derivatives: formation and some properties of pyrrolodiazepines, 1441–6
Linear free energy relations in the electron–transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
RELAXATION
Conformational study of the cyclic hexapeptide cyclo(L–Ala–L–Pro–Gly–L–Val–Gly–L–Val), by nuclear magnetic resonance spectroscopy, 206–11
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Conformational analysis of apparicine using proton nuclear magnetic relaxation: application of transient nuclear Overhauser enhancements, 919–24
Carbon–13 spin–lattice relaxation times of megalomicins, fourteen–membered macrolide antibiotics, 1847–9
RESIDUE
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
RESONANCE
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
RETROCYCLODIMERIZATION
Substituent effects on a reversible cycloaddition reaction, 4–7
RETURN
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
REVERSAL
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
RIBOFLAVIN
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
RIBOSYL
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
RIBOSYLATION
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
RING
Ring asymmetry in 4–morpholinobenzenediazonium tetrafluoroborate: crystallographic and SCF studies, 8–12
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
Studies in decarboxylation. Part 13. The incursion of a stepwise mechanism in the gas–phase decarboxylation of cyclopropylacetic acids, 553–6
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open–chain sulfonate esters, 610–15
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1–(substituted–aryl)butadienes. A ground–state substituent effect on an excited–state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92
A study on the electrochemical reduction mechanism of rotenone, 1277–81
A study of the aerial oxidation of L–cysteinyl–L–cysteine: purification of the product and equilibrium relationship involving the monomeric and dimeric cyclic derivatives, 1297–300
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
The thermal ring opening of 3,3–disubstituted cyclobutenes, 1391–8
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
Ring–closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
ROTATION
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) boonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple
molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
Nuclear magnetic resonance studies of N–nitrosamines. Part 4. Barriers to rotation about the nitrogen–nitrogen bond for some cyclic compounds, 476–82
Conformational studies by dynamic nuclear magnetic resonance. Part 17. Stereodynamic processes in hindered piperidyl–amides and –amidines, 717–23
The conformational preferences of N–alkylpyrrole mono– and diesters: an infrared and nuclear magnetic resonance study, 737–40
Acyl radicals: the relation between electron spin resonance spectra, structure, and stability in a family of σ–radicals, 819–24
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
Barriers to rotation in acylguanidines and acylguanidinium ions, 1592–5
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
ROTATIONAL
Conformational studies by dynamic nuclear magnetic resonance spectroscopy. Part 19. Substituent effects upon the rotational barrier of alkylanilines, 1704–7
ROTENOL
A study on the electrochemical reduction mechanism of rotenone, 1277–81
ROTENONE
A study on the electrochemical reduction mechanism of rotenone, 1277–81
ROTOR
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
RUTHENIUM
Electron–transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris–2,2'–bipyridylruthenium(–III) cation, 557–60
Mechanism of oxidation of cyclohexanone under acid conditions. 4. Primary and solvent isotope effects on oxidations of ketones and enols: indirect determination of relative enol contents of isotopically substituted ketones in water and D_2O, and solvent isotope effects for the electron transfer, 657–61

SALT
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
Homosolvolysis, 260–6
SANTONIN
Crystal and molecular structure of 2α–bromo–α–tetrahydrosantonin 1116–18
SATD
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
SCAVENGER
Photolysis of butane–2,3–dione in fluorocarbon solvents; a chemically induced nuclear polarization (CIDNP) study, 796–804
SCF
Crystal and molecular structure of the N–oxyl radicals 1,2–dihydro–3–oxo–2,2–diphenyl–3H–indole 1–oxyl and 1,2–dihydro–2,2–diphenylquinoline 1–oxyl. Attempted calculation of hyperfine coupling constants by the INDO–SCF–MO method, 786–91
SCHIFF
Anodic pyridination of 2–hydroxy–3–methoxy–5–methylbenzaldehyde and its Schiff base derivatives, 347–57
Potential energy profiles for unimolecular reactions of isolated organic ions: some isomers of $C_4H_{10}N^+$ and $C_5H_{12}N^+$, 1219–27
SCISSION
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
SECO
Synthesis, structure, and reactions of secosteroids containing a medium–sized ring. Part 17. Structure–reactivity relationship in the solvolysis of 5,10–secosteroidal 3–tolylsulfonates, 1356–65
SECONDARY
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
SECOSTEROID
Synthesis, structure, and reactions of secosteroids containing a medium–sized ring. Part 17. Structure–reactivity relationship in the solvolysis of 5,10–secosteroidal 3–tolylsulfonates, 1356–65
SELECTIVITY
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4–tert–butylthiane, 385–90
The reactivity of carbenes from photolysis of diazo compounds towards carbon–hydrogen bonds. Effects of structure, temperature, and matrix on the insertion selectivity, 603–9
Site selectivity in the β–scission of alkoxyphosphoranyl radicals. A reinterpretation, 1549–56
SELENIDE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
SELENIENYL
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2–selenienyl and 2–tellurienyl groups, 971–5
SELENIENYLPHENOL
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2–selenienyl and 2–tellurienyl groups, 971–5
SEMICONDUCTOR
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
SEMIQUINONE
The electron spin resonance spectra of semiquinones obtained from some naturally occurring methoxybenzoquinones, 1757–9
SENSITIZATION
Photochemistry of acylic βγ–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1–arylbutadienes, 809–15
SENSITIZER
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
Singlet photosensitization of simple alkenes. Part 2. Photochemical transformation of cycloocta–1,5–dienes sensitized by aromatic ester, 1678–82
SESQUITERPENE
Crystal and molecular structure of melampodin B, a 4,5–cis–9,10–trans–germacranolide sesquiterpene dilactone, 1425–8
Isolation and crystal structure of grilactone, a new guaianolide from Ferula oopoda, 1683–5
SHIELDING
The conformations of cis and trans isomers of benzylideneanilines: ^1H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
SHIFTS
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
SILANE
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas–phase thermal reactions of trichloro(1–1–difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
Electron spin resonance spectra and structure of the radical anions of methyl derivatives of halo–silanes and –germanes, 1690–5
SILOXYL
An electron spin resonance study of the addition of alkoxyl and siloxyl radicals to pyrrolylphosphines, 876–82
SILOXYPHENOXYL
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
SILVER
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
SILYL
An electron spin resonance study of the addition reactions of arylsilyl and diphenylphosphino radicals to para–quinones, 225–8
SILYLATED
Gas–phase thermolyses. Part 3. Gas–phase thermolysis of silylated thionocarboxylic acid derivatives: a route to thioketenes?, 1557–62
SILYLMETHYL
Conformation of α–substituted cycloalkyl radicals, 1761–3
SILYLMETHYLCYCLOALKYL
Conformation of α–substituted cycloalkyl radicals, 1761–3
SIMULATION
A quantitative analysis of the importance of π nonbonded interactions in double rotors, 467–70
SINGLE
Photochemistry of o–phthalaldehyde, 724–30
SINGLET
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
SITE
Substitution reactions of phenylated aza–heterocycles. Part 1. Nitration of 2,5–diphenyl–1,3,4–oxadiazole: a product study using high performance liquid chromatography, 773–7
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
SODIUM
Kinetics and mechanism of the oxidation of substituted benzyl alcohols by sodium N–chlorobenzenesulfonamide, 676–8
Luminescence characteristics of thiamine derivatives, 1288–92
SOLN
The structures of nitronate salts in solution as determined by carbon–13 and proton NMR spectroscopy, 731–6
SOLUTE
Homosolvolysis, 260–6
SOLVATED
Vibrational analysis of a model for the hydroxide ion in aqueous

SOLVATED(contd)
solution, 1840–6
SOLVENT
The mechanism of photolysis of some benzyltrimethylammonium salts in water and in alcohols, 77–82
The isoimide–imide rearrangement, 121–6
Homosolvolysis, 260–6
The mechanism of cyclization of 1,4–diaryl–1–azido–2,3–diazabuta–1,3–dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
The conformational equilibriums in a cyclohexene–like system: 3,6–dihydro–1,2–oxazine, 550–2
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
Kinetic deuterium solvent isotope effects in the pyridine–catalyzed iodination of 2–nitropropane in aqueous and methanolic solutions, 1421–4
Mechanism of the reaction of cumyloxyl radicals in a mixture of hydrocarbons, 1457–9
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
Oxidation by singlet oxygen of 2–(2–quinolyl)indan–1,3–dione, 1569–72
A conformational study of the 3–p–tolylsulfonylbutan–2–ol and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
SOLVOLYSIS
Reactivity–selectivity relationships. Part 12. Intermediates formed in the solvolysis of substituted benzyl derivatives. The importance of HOMO–LUMO interactions in determining selectivity, 250–4
Homosolvolysis, 260–6
Secondary deuterium kinetic isotope effects in the solvolysis of 4–tert–butylcyclohexyl and bicyclo[3.2.1]octan–3–yl toluene–p–sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan–2–ol, 427–31
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8
Heterogeneous catalysis in solution. Part 21. The effect of various carbons on the solvolysis of 2–chloro–2–methyl–1–phenylpropane in 50% v/v ethanol–water, 1228–33
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
Homosolvolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
Synthesis, structure, and reactions of secosteroids containing a medium–sized ring. Part 17. Structure–reactivity relationship in the solvolysis of 5,10–secosteroidal 3–tolylsulfonates, 1356–65
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51
SPECTRA
Free radical intermediates in the photoreduction of p–benzoquinone in ethanol solution, 61–4
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1–oxa–3,4–diaza–, 1–thia–3,4–diaza–, 1,2,4–triaza–, and 1,2,4,5–tetraazacyclohexanes, 91–5
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
Kinetics and mechanisms of the decompositions of the molecular ions of pentanal and its monomethyl–substituted homologs in the picosecond to microsecond time interval following field ionization, 306–12
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Investigation of the electronic structure of 2–(acetylamino)prop–2–enoic acid (N–acetyldehydroalanine) by He(I) and He(II) photoelectron spectroscopy, 483–5
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o–benzeno, etheno, epoxy, or epithio functions, 486–92
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
Reaction mechanisms of gaseous organic ions. Part 17. Intramolecular stereoselective competition in mass spectral homolytic reactions of nitrogen–oxygen–heterocyclic molecular ions, 541–3
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Protonation equilibriums of 1–arylazo–4–naphthols and 1–arylazo–4–methoxynaphthalenes, 628–31
The conformations of cis and trans isomers of benzylideneanilines: ^{1}H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
Synthesis, spectral and structural studies, and an evaluation of the hydrogen bonding of some phenylhydrazones, 1622–6
An infrared study of the conformations and association of pyrrole–2–carbaldehydes and pyrrole–2–carboxylates, 1631–5
A conformational study of the 3–p–tolylsulfonylbutan–2–ol and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
Ab initio calculations and photoelectron spectra of cyclic oxamides 1815–21
SPIN
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
Geminal and vicinal carbon–13–carbon–13 coupling constants in carboxylic acid derivatives, 1028–32
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Homosolvoolysis. Part 2. Di–tert–butyl nitroxide as the solvent and 2–methyl–2–nitrosopropane as internally generated spin trap, 1259–61
The use of carbon–13 magnetic resonance chemical shifts and long–range carbon–13–proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
SPINDO
The photoelectron spectra of some 1,9–disubstituted phenalenes, 957–60
SPIROCYCLIZATION
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
SPIROPHOSPHORANE
Optically active five coordinated phosphoranes. Apicophilicity of the amino group compared with hydrogen: a comparative kinetic study. Influence of the activation entropy, 976–80
STABILITY
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
Reaction of 1,3–dipoles in aqueous solution. 5. Structural studies on isolable (E)– and (Z)–NN–disubstituted amidoximes. Crystal and molecular structure of (E)–morpholino–p–nitrobenzamidoxime, 704–9
Metal–ion catalyzed hydrolysis of some β–lactam antibiotics, 1725–32
STANNANE
Ring–opening of some radicals containing the cyclopropylmethyl system, 1473–82
STATE
The effect of hydroxylic solvents on the solvolysis of tert–butyl chloride; calculation of the cavity terms, 854–9
Nucleophilic addition to ferrocenyl–stabilized carbocations: the nature of the transition state, 1520–8
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
STEREOCHEM
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
Retentive solvolysis. Part 12. Mechanism of the reaction of optically active 1–(p–methoxyphenyl)ethyl trifluoroacetate with phenol and methanol in benzene and cyclohexane, 842–8

STEREOCHEM(contd)
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4-dimethyl-1-phenyl-3-phospholene. Phosphinothioylidene, 1017–21
The kinetics and mechanism of ring opening of radicals containing the cyclobutylcarbinyl system, 1083–92
Crystal and molecular structure of 2α-bromo-α-tetrahydrosantonin 1116–18
The kinetics and mechanism of the reaction of 5-fluorocytosine with hydroxylamine, 1460–6
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20
STEREOISOMER
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
STEREOSELECTIVITY
Stereoselective reduction of indoline nitroxide radicals, 710–13
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N-acyl-L-histidine in micelles, 1483–7
STEREOSPECIFICITY
Stereospecific reduction of 3-hydroxy-3H-indoles and of their corresponding N-oxides with sodium borohydride and lithium aluminum hydride. Synthesis of true 1-hydroxy-2,3-disubstituted indoles. Crystal and molecular structure of 3-hydroxy-2,3-diphenylindoline, 339–46
STERIC
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
The torsional barrier in aromatic carbonyl compounds, 363–9
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 1. 5,5-Dialkyl-, 5-alkenyl-5-alkyl-, 5-alkyl-5-aryl-, 5,5-dialkenyl-, 5,5-diaryl- and 5,5-dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)-substituent effects with acid strength, 515–22
Dissociation constants of the cyanohydrins of some substituted thian-4-ones, 714–16
Determination of a new scale of ortho-steric parameters S^0 from N-methylation of pyridines, 1350–5
Nucleophilic addition to ferrocenyl-stabilized carbocations: the nature of the transition state, 1520–8
A kinetic study of concomitant addition and deprotonation reactions of ferrocenyl-stabilized carbocations in aqueous acetonitrile and of the reverse reactions, 1859–67
STEROID
Conformational studies. Part 13. Proton NMR and x-ray analyses of 2β-bromo-3α-hydroxy-5α-pregnane-11,20-dione, 3α-hydroxy-2β-methoxy-5α-pregnane-11,20-dione, and 3α-hydroxy-2α-methyl-5α-pregnane-11,20-dione, 1176–82
Synthesis, structure, and reactions of secosteroids containing a medium-sized ring. Part 17. Structure–reactivity relationship in the solvolysis of 5,10-secosteroidal 3-tolylsulfonates, 1356–65
STOKES
Indolyl alkali-metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
STRAIN
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open-chain sulfonate esters, 610–15
STRETCHING
Integrated intensities of hydroxy stretching vibration bands in some bicyclic systems containing a hydroxy group β to o-benzeno, etheno, epoxy, or epithio functions, 486–92
STYRENE
Oxidation by cobalt(III) acetate. Part 2. Oxidation of styrene in acetic acid, 569–73
STYRYLPYRIDINE
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
SUBLIMATION
Thermochemistry of bridged-ring substances. Enthalpies of formation of diamantan-1-, -3-, and -4-ol and of diamantanone 1686–9
SUBSTITUENT
Substituent effects on a reversible cycloaddition reaction, 4–7
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω-phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side-chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
The isoimide–imide rearrangement, 121–6
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Reactivity of 7-halo-4-nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
The interpretation of quantitative linear correlations. Substituent effects on the properties of naphthalene and its derivatives, 330–8
The torsional barrier in aromatic carbonyl compounds, 363–9
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
The kinetics of hydrolysis of N-trimethylammonioacetamide and of substituted N-trimethylammoniobenzamides in concentrated sulfuric acid, 380–4
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Mechanism of reaction of 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline (EEDQ) with nucleophiles and its crystal structure, 412–20
Electronic interactions in aromatic compounds. Direct electronic interaction between aromatic rings in conjugated and nonconjugated cis compounds, 463–6
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 1. 5,5-Dialkyl-, 5-alkenyl-5-alkyl-, 5-alkyl-5-aryl-, 5,5-dialkenyl-, 5,5-diaryl- and 5,5-dihalobarbituric acids, 504–14
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)-substituent effects with acid strength, 515–22
The mechanism of cyclization of 1,4-diaryl-1-azido-2,3-diazabuta-1,3-dienes to tetrazoles. Imidoyl azides stabilized by slow nitrogen inversion, 535–40
The conformational equilibriums in a cyclohexene-like system: 3,6-dihydro-1,2-oxazine, 550–2
Electro-organic chemistry. Part 3. Transannular interaction and reactions of 5,13-disubstituted [2.2]metacyclophanes: substituent effects on carbon-13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Rapid acid-catalyzed and uncatalyzed hydration of ketenimines, 579–91
Hydroxy-group participation in the hydrolysis of amides and its effective concentration in the absence of strain effects, 679–84
Structure–reactivity relationships and the mechanism of general base catalysis in the hydrolysis of a hydroxy amide. Concerted breakdown of a tetrahedral intermediate, 685–92
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
Dissociation constants of the cyanohydrins of some substituted thian-4-ones, 714–16
Equilibriums in cyanohydrin formation from, and the kinetics of reduction by sodium borohydride of, substituted acetylbiphenyls, 749–51
Mechanisms for reactions of halogenated compounds. Part 3. Variation in activating influence of halogen substituents in nucleophilic aromatic substitution, 778–80
Electrophilic aromatic substitution. Part 26. The effect of the cyclopropyl substituent in aromatic detritiation, 781–5
Photochemistry of arylbutadienes. Part 2. Preparation and photochemistry of 1-(substituted-aryl)butadienes. A ground-state substituent effect on an excited-state reaction, 805–8
Photochemistry of aryl dienes. Part 3. Mechanisms of photoaddition of methanol to 1-arylbutadienes, 809–15
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4-Substituted and 3,4-disubstituted anilines, 832–4
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻

SUBSTITUENT(contd)
constants of 2-selenienyl and 2-tellurienyl groups, 971–5
An approach for assessing the relative importance of field and σ inductive contributions to polar substituent effects based on the nonproportionality of field and σ inductive substituent constants 985–92
Linear free energy ortho–correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3–substituted 2–thenoyl chlorides with aniline in benzene, 1153–5
Electrical effects in substituted thiazoles. pK_a Values of some 5–substituted 2–aminothiazoles 2–NN–dimethylaminothiazoles, 1156–8
Hydrolysis of azo esters via azoformate intermediates, 1238–43
The conformations of cis and trans isomers of benzylideneanilines: ^1H nuclear magnetic resonance and optical spectroscopic studies, 1282–7
Ring–chain isomerism of some 4,5–disubstituted pyridazines involving heterospiro compounds, 1339–43
Long–range substituent effects in carbon–13 chemical shifts of arylcarbenium ions. Evidence of large substituent–substituent interactions between remote groups, 1399–402
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504
Aggregation of 4–substituted pyridine N–oxide–trifluoroacetates in benzene, 1516–19
Studies on decarboxylation reactions. Part 4. Kinetic study of the decarboxylation of some N–alkyl– or N–phenyl–substituted 5–amino–1,3,4–oxadiazole–2–carboxylic acids, 1627–30
Carbenes in a rigid matrix. Substituent effects on the temperature dependence of α–carbonylcarbene reactions, 1636–41
A conformational study of the 3–p–tolylsulfonylbutan–2–ol and 1,2–diphenyl–2–p–tolylsulfonylethanol diastereoisomeric pairs, 1642–6
Singlet photosensitization of simple alkenes. Part 1. Cis–trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
The protonation of some 5–substituted thiophene–2–carboxamides, 1721–4
Formation and thermal reaction of O–(N–acetylbenzimidoyl)benzamidoxime: comparison with the formation of 3,5–disubstituted 1,2,4–oxadiazoles from O–acetylarylamidoximes and O–aroylacetamidoximes, 1792–9
Electrophilic aromatic reactivity. Part 27. Protiodetritiation of chrysene, 1828–31

SUBSTITUTION
Crown ethers as phase–transfer catalysts. A comparison of anionic activation in aqueous–organic two–phase systems and in low polarity anhydrous solutions by perhydrodibenzo–18–crown–6, lipophilic quaternary salts, and cryptands, 46–51
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Sodium borohydride as a reagent for nucleophilic aromatic substitution by hydrogen: the role of hydride Meisenheimer adducts as reaction intermediates, 243–9
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
The kinetics of the reactions of picryl chlorides with some substituted anilines. Part 5, 829–31
The kinetics of the reactions of picryl chloride with some substituted anilines. Part 6. 4–Substituted and 3,4–disubstituted anilines, 832–4
Design of inclusion compounds: systematic structural modification of the hexa–host molecule hexakis(benzylthiomethyl)benzene, 999–1005
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
Chemical reactivity and electronic structure of N–methyl derivatives of xanthine, 1293–6
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Rearrangement of radical ipso intermediates by 1,2–shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
The reaction of trifluoromethyl radicals with neopentane. An S_H2 reaction at a saturated aliphatic carbon atom, 1452–6
Nucleophilic attack on halo(phenyl)acetylenes by halide ions, 1714–20

SULFANILATE
Electrophilic substitution in pyrroles. Part 5. Reaction of dipyrrylmethanes with arenediazonium ions, 113–16

SULFATE
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4–dioxadithiane 1,1,3,3–tetraoxide formation in the sulfonation of 3–phenylpropan–1–ol, 358–62
On the active species of aluminum(III) bromide–copper(II) bromide mixtures as catalysts for the isomerization of pentane, 1201–5

SULFENYL
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25

SULFENYLURETHANE
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25

SULFIDE
Mechanism of the oxidation of alkyl aryl sulfides by peroxodiphosphate, 170–5
Identification of the product from nicotine and sulfur as bis–1–methyl–2–(3–pyridyl)pyrrol–3–yl disulfide, 326–9
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4–tert–butylthiane, 385–90
Metal catalysis in oxidation by peroxides. Part 7. Ligand exchange and catalytic activity of molybdenum(VI) species in the oxidation of organic sulfides by tert–butyl hydroperoxide, 457–62
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
Photochemistry of phospholenes. Part 7. Element effects on the photofragmentation of 3,4–dimethyl–1–phenyl–3–phospholene. Phosphinothioylidene, 1017–21
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504

SULFINIC
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53

SULFITE
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6–trinitrotoluene and 2,4,6–trinitrobenzyl chloride, 1850–3

SULFONAMIDE
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9

SULFONATE
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open–chain sulfonate esters, 610–15
Evidence against appreciable internal ion pair return in the solvolyses of tertiary aliphatic halides. Measurement of α–methyl/hydrogen rate ratios in hexafluoropropan–2–ol–water, 1244–52
Multivariate analysis of solvolysis kinetic data; an empirical classification paralleling charge delocalization in the transition state, 1447–51

SULFONATION
Aromatic sulfonation. Part 72. Behavior of some 9–alkylanthracenes containing 2 α–hydrogens and 0–3 β–hydrogens in the side–chain with dioxane–sulfur trioxide in dioxane as sulfonating medium; mechanism for alkyl side–chain reduction and subsequent sulfonation, 13–18
Aromatic sulfonation. Part 73. Behavior of three 9–alkylanthracenes containing one side–chain α–hydrogen in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 74. Sulfonation of some 9–alkenylanthracenes and the corresponding benzenes with dioxane–sulfur trioxide, 23–7
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5–tetramethylbenzene, naphthalene, and 1,6–methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation

SULFONATION(contd)
28–32
Aromatic sulfonation. Part 76. Sulfonation in sulfuric acid of ω-phenylalkanes containing the NH_3^+, NMe_3^+, or NO_2 substituent at position 1. Comparison of the side-chain NH_3^+, NMe_3^+, NO_2, SO_3H, and OSO_3H substituent effects, 33–8
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
Kinetics of sulfodeacylation of dimesityl ketone: a dual-path sequence of first-order reactions, 835–7
Aromatic sulfonation. Part 78. Behavior of some α-chloro-substituted 9-methyl-, 9-ethyl-, 9-isopropylanthracenes, and of 1,4,9-trimethylanthracene in dioxane-sulfur trioxide complex in dioxane as sulfonating medium, 904–10
Aromatic sulfonation. Part 79. Sulfonation of some (poly)-methylanthracenes with dioxane-sulfur trioxide complex in dioxane, 911–14
Photochemical substitution of amino- and hydroxy-anthraquinones, 1544–8
SULFONATO
Crystallographic determination of the cis-configuration of syn-disodium 4-sulfonatobenzenediazotate, 1093–5
SULFONATOBENZENE
Crystallographic determination of the cis-configuration of syn-disodium 4-sulfonatobenzenediazotate, 1093–5
SULFONATOBENZENEDIAZOTATE
Crystallographic determination of the cis-configuration of syn-disodium 4-sulfonatobenzenediazotate, 1093–5
SULFONE
Nucleophilic substitution at sulfur. Part 3. The alkaline hydrolysis of some cyclic and open-chain sulfonate esters, 610–15
SULFONIUM
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
SULFONYL
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron-deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5-dimethyl-3-methylsulfonylcyclohex-2-enone, 1166–9
Investigations of structure and conformation. Part 14. INDO and electron spin resonance studies of aliphatic sulfonyl radicals, 1429–36
SULFONYLCYCLOHEXENONE
Hydrogen bonds involving polar carbon–hydrogen groups. Part 7. Electron-deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5-dimethyl-3-methylsulfonylcyclohex-2-enone, 1166–9
SULFONYLETHANOL
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
SULFONYLHYDRAZIDE
Crystal structure of a 1:2 channel inclusion adduct of 5-methylbenzene-1,3-dicarboxaldehyde bis-(p-tolylsulfonylhydrazone) and benzene, 672–5
SULFONYLTHIOPHENE
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
SULFOPHENYLPROPYL
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
SULFOXIDE
Primary processes in the reaction of hydroxyl radicals with sulfoxides, 146–53
A new acid-catalyzed rearrangement of thiosulfinates to α-acetylthiosulfoxides in acetic anhydride, 432–40
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
A general preference for gauche alkyl–phenyl interactions. The use of lanthanide shift reagents in determining the preferred conformations of some alkyl 1-phenylethyl sulfoxides, 1306–12
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
SULFUR
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground- and excited-state interactions in some α-sulfur-substituted cycloalkanones, 453–6
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three-electron-bond R_2SX radicals in aqueous solutions, 758–62
Aromatic sulfonation. Part 78. Behavior of some α-chloro-substituted 9-methyl-, 9-ethyl-, 9-isopropylanthracenes, and of 1,4,9-trimethylanthracene in dioxane-sulfur trioxide complex in dioxane as sulfonating medium, 904–10
The protonation of some 5-substituted thiophene-2-carboxamides, 1721–4
SULFURANYL
An electron spin resonance study of sulfuranyl radicals of the type R_2S–SX [X = CF_3 or R'C(O)], 1497–504
SULFURIC
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
SULTONE
Aromatic sulfonation. Part 73. Behavior of three 9-alkylanthracenes containing one side-chain α-hydrogen in dioxane-sulfur trioxide complex in dioxane as sulfonating medium, 19–22
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
SUPEROXIDE
Formation of superoxide radical anion in the horseradish peroxidase-catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
SURFACTANT
Stereoselective micellar catalysis. Reactions of amino acid ester derivatives with N-acyl-L-histidine in micelles, 1483–7
Aggregation behavior of synthetic peptide surfactants, 1809–15
SYMMETRY
Acetamide hemihydrochloride: a case of false high crystallographic symmetry. Vibrational spectra of the $^2H_0$ and NN'O-$^2H_5$ derivatives, 395–400
SYSTEM
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n-heptane system 1406–10
TAFT
First thermodynamic dissociation constants of 5,5-disubstituted barbituric acids in water at 25°. Part 2. Structure–reactivity relationships (SRR). Linear free energy relationships which correlate C(5)-substituent effects with acid strength, 515–22
An extension of the Kamlet–Taft basicity scale of solvents, 1563–8
TAUTOMER
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2-hydroxypyridines, 620–3
TAUTOMERISM
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
Influence of carboxylic acid association upon the lactim–lactam tautomeric equilibrium of 2-hydroxypyridines, 620–3
Keto–enol equilibriums in mixed acetic sulfuric anhydrides, 662–7
Electrical effects in substituted thiazoles. pK_a Values of some 5-substituted 2-aminothiazoles 2-NN-dimethylaminothiazoles, 1156–8
β-Thioxoketones. Part 6. Electronic absorption spectra of aromatic β-thioxoketones. A study of enol–enethiol tautomerism, 1768–73
TAUTOMERIZATION
β-Thioxoketones. Part 6. Electronic absorption spectra of aromatic β-thioxoketones. A study of enol–enethiol tautomerism, 1768–73
TCNE
High-pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
TCNQ
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'-bithiopyranylidene (BTP) 1578–85
TELLURIENYL
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2-selenienyl and 2-tellurienyl groups, 971–5

TELLURIENYLPHENOL
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2-selenienyl and 2-tellurienyl groups, 971–5
TELLUROPHENE
Heteroaromatic rings as substituents. Part 5. Evaluation of σ and σ⁻ constants of 2-selenienyl and 2-tellurienyl groups, 971–5
TERTIARY
Formation of superoxide radical anion in the horseradish peroxidase–catalyzed oxidation of three aromatic tertiary amines with hydrogen peroxide, 1–3
TETRAAZA
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
TETRAAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. 99. X-ray crystal structures of 1,2,4,5-tetraazacyclohexanes: molecular dimensions for examples of three out of the four conformations existing in solution, 1733–8
TETRAAZAHEXAMETHYLCYCLOTETRADECANE
Preparation and molecular structure of bridged tetraaza macrocyclic ligands, 1186–90
TETRAFLUOROBORATE
The generation and electrophilic reactions of dimethyl sulfide cation radicals, 931–6
TETRAHYDRO
Crystal and molecular structure of 2α-bromo-α-tetrahydrosantonin 1116–18
TETRAHYDROQUINOLINE
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α-cholest-2-eno[3,2-b]pyridine, 598–602
TETRAMETHYL
Aromatic sulfonation. Part 75. Intramolecular kinetic isotope effects of hydrogen in the aprotic sulfonation of 1,2,4,5-tetramethylbenzene, naphthalene, and 1,6-methano[10]annulene. Implications for the mechanism of the sulfur trioxide sulfonation 28–32
Gas-phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas-phase thermolysis of a thioketene S-oxide, 1206–11
TETRAMETHYLPARACYCLOPHANE
The radical ions of 4,5,7,8-tetramethyl[2.2]paracyclophane, 1045–50
TETRAMETHYLPYRROLE
Electrophilic substitution in pyrroles. Part 4. Hydrogen exchange in acid solution, 110–12
TETROXIDE
Aromatic sulfonation. Part 77. Sultone and 1,3,2,4-dioxadithiane 1,1,3,3-tetraoxide formation in the sulfonation of 3-phenylpropan-1-ol, 358–62
THALLIUM
A kinetic study of the soft metal ion–promoted hydrolyses of some S-acetals, 1191–200
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
THENOYL
Linear free energy ortho-correlations in the thiophene series. Part 7. Kinetics of the reaction of some 3-substituted 2-thenoyl chlorides with aniline in benzene, 1153–5
THEORY
The interpretation of quantitative linear correlations. Substituent effects on the properties of naphthalene and its derivatives, 330–8
Tetrapyrroles. Part 1. Substituent effects on porphyrin electronic spectra, 370–2
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
THERMODN
Substituent effects on a reversible cycloaddition reaction, 4–7
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di- and triethylamine with 1,5-dimethyl-2,4,8-trinitronaphthalene, 132–8
Conformational studies on 5-formyl-5,6,7,8-tetrahydrofolic acid (folinic acid) using proton and carbon-13 nuclear magnetic resonance measurements: two interconverting conformations, 176–80
The experimental determination of the conformational free energy, enthalpy, and entropy differences for alkyl groups in alkylcyclohexanes by low temperature carbon-13 magnetic resonance spectroscopy, 255–9
Thermodynamic nitration rates of aromatic compounds. Part 1. The nitration of benzene and some benzene derivatives in aqueous sulfuric and perchloric acids. A comparison of the results referred to water as standard state, 574–8
Reaction of 1,3-dipoles in aqueous solution. 5. Structural studies on isolable (E)- and (Z)-NN-disubstituted amidoximes. Crystal and molecular structure of (E)-morpholino-p-nitrobenzamidoxime, 704–9
Thermodynamic analysis of proton dissociation equilibriums of some 4-diethylaminoazobenzenes in 20 wt% aqueous methanol solution, 937–40
Ion pairing of 1,5-diarylpentadienyl carbanions, 1137–40
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
β-Thioxoketones. Part 6. Electronic absorption spectra of aromatic β-thioxoketones. A study of enol–enethiol tautomerism, 1768–73
THERMOLYSIS
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Gas-phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas-phase thermolysis of a thioketene S-oxide, 1206–11
THERMOPOWER
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'-bithiopyranylidene (BTP) 1578–85
THIA
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1-oxa-3,4-diaza-, 1-thia-3,4-diaza-, 1,2,4-triaza-, and 1,2,4,5-tetraazacyclohexanes, 91–5
THIAAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 101. 1,3-Diazacyclohexanes and 1-thia-3-azacyclohexanes, 1746–51
THIABURIMAMIDE
An infrared study of intramolecular hydrogen-bonding in the histamine H_2-receptor antagonists, burimamide, metiamide, cimetidine, and related compounds, 915–18
THIADIAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1-oxa-3,4-diaza-, 1-thia-3,4-diaza-, 1,2,4-triaza-, and 1,2,4,5-tetraazacyclohexanes, 91–5
The conformational analysis of saturated heterocycles. Part 95. Synthesis and conformational analysis of 3,4-dimethyl-, 2,3,4-trimethyl-, and 2,2,3,4-tetramethyl-1-thia-3,4-diazacyclohexanes, 279–85
THIADIAZINE
The rearrangement of 2-amino-1,3,4-thiadiazines to 3-amino-2-thiazolimines. Part 1. The rates of rearrangement of a series of 5-alkyl- and 5-aryl-2-amino-1,3,4-thiadiazines at 30 and 50°C, 890–9
THIADIAZOLE
Structure and protonation study of the imidazo[2,1-b]-1,3,4-thiadiazole system: proton nuclear magnetic resonance, crystal and molecular structure of 5,6-dimethylimidazo[2,1-b]-1,3,4-thiadiazole and its hydrobromide, 421–6
THIAMINE
Luminescence characteristics of thiamine derivatives, 1288–92
THIANE
Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane, 385–90
THIANONE
Dissociation constants of the cyanohydrins of some substituted thian-4-ones, 714–16
THIAZOLE
Electrical effects in substituted thiazoles. pK_a Values of some 5-substituted 2-aminothiazoles 2-NN-dimethylaminothiazoles, 1156–8
THIAZOLIMINE
The rearrangement of 2-amino-1,3,4-thiadiazines to 3-amino-2-thiazolimines. Part 1. The rates of rearrangement of a series of 5-alkyl- and 5-aryl-2-amino-1,3,4-thiadiazines at 30 and 50°C, 890–9
THIENYLACRYLIC
The dissociation constants of the E- and Z-αβ-diarylacrylic acids,

THIENYLACRYLIC(contd)
161–4
THIO
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
THIOACETAL
A kinetic study of the soft metal ion–promoted hydrolyses of some S–acetals, 1191–200
THIOBENZAMIDE
On the chirality of 2–hydroxy–N,N–dialkylthiobenzamides. Demonstration of three consecutive conformational processes, 949–56
THIOBISIMIDAZOPYRIDINIUM
X–ray studies on potent new curariform agents. Part 2. The crystal and molecular structure of 3,3'–thiobis(2–methyl–1–phenylimidazo[1,5–a]pyridinium) bistetrafluoroborate(III), 1075–9
THIOCARBAMOYL
The crystal and molecular structure of 1,3–bis(thiocarbamoyl)–2–N,N–dimethylaminopropane hydrochloride (Cartap), 1805–8
THIOCARBONYLCYCLOHEXANE
Gas–phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas–phase thermolysis of a thioketene S–oxide, 1206–11
THIOCARBOXYLATE
Gas–phase thermolyses. Part 3. Gas–phase thermolysis of silylated thionocarboxylic acid derivatives: a route to thioketenes?, 1557–62
THIOCYANATE
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18–crown–6 with benzylammonium thiocyanate, 1529–43
THIOCYCLOALKANONE
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
THIOFORMALDEHYDE
Oxathiiranes. Part 5. Oxathiirane O–oxide, a possible intermediate in the reaction between singlet oxygen and thiocarbonyl compounds, 188–90
THIOHYDANTOIN
Carbon–13 nuclear magnetic resonance studies on the conformation of substituted hydantoins, 1573–7
THIOKETENE
Gas–phase thermolyses. Part 2. Oxathiiranes. Part 7. Gas–phase thermolysis of a thioketene S–oxide, 1206–11
Gas–phase thermolyses. Part 3. Gas–phase thermolysis of silylated thionocarboxylic acid derivatives: a route to thioketenes?, 1557–62
THIOL
Oxidation of thiols and disulfides with the ammoniumyl radical cation: an ESR investigation, 191–7
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Leaving group effects in thiol ester alkaline hydrolysis. Part 1. A ketene–mediated (E1cB) path for basic hydrolysis of S–acetoacetylcoenzyme A and analogs, 1037–44
The kinetics and mechanism of the thallium ion–promoted hydrolysis of thiol esters, 1403–5
THIOLATION
Photochemical substitution of amino– and hydroxy–anthraquinones, 1544–8
THIOLSULFATE
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
THIOLSULFONATE
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
THIOMALONDIALDEHYDE
On hydrogen bonding in the intramolecularly chelated tautomers of enolic malondialdehyde and its mono– and dithio analogs, 1080–2
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
THIOPEROXIDE
Theoretical investigations of the protonation of dihydrogen sulfoxide and intramolecular interconversion of the protonated sulfoxide and hydrogen thioperoxide, 1652–8
THIOPHENE
Factors controlling the selectivity of ipso attack in homolytic aromatic substitutions. Reactions of alkyl radicals with nitrothiophene derivatives, 1331–5
Rearrangement of radical ipso intermediates by 1,2–shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
Reaction of 2,5–dimethyl–3,4–dinitrothiophene with secondary amines. Formation and crystal structure analysis of 2,5–dimethyl–trans–2,3–dimorpholino–4–nitro–2,3–dihydrothiophene, 1764–7
THIOPHENECARBOXALDEHYDE
Rearrangement of radical ipso intermediates by 1,2–shift of a formyl group. Reactions of adamantyl radicals with thiophene carbaldehydes, 1336–8
THIOPHENECARBOXAMIDE
The protonation of some 5–substituted thiophene–2–carboxamides, 1721–5
THIOPHENOL
Reactivity of 7–halo–4–nitrobenzofurazans towards thiophenols. A kinetic investigation, 239–42
Coenzyme models. Part 24. Micellar catalysis of flavin–mediated reactions. Influence of the flavin structure on the reactivity, 1111–15
THIOPHOSPHINATE
The proton magnetic resonance spectra of chiral phosphinate esters. Chemical shift non–equivalence of enantiomers induced by optically active phosphinothioic acids, 1505–11
THIOPYRAN
Substituent effects on a reversible cycloaddition reaction, 4–7
THIOPYRANYLIDENE
Preparative, structural, and electrical studies of the 1:1 and 2:3 tetracyanoquinodimethane salts of 4,4'–bithiopyranylidene (BTP) 1578–85
THIOSEMICARBAZIDE
The rearrangement of 2–amino–1,3,4–thiadiazines to 3–amino–2–thiazolimines. Part 1. The rates of rearrangement of a series of 5–alkyl– and 5–aryl–2–amino–1,3,4–thiadiazines at 30 and 50°C, 890–9
THIOSULFINATE
A new acid–catalyzed rearrangement of thiosulfinates to α–acetylthiosulfoxides in acetic anhydride, 432–40
THIOSULFONIUM
Effect of aryl substitution at ring carbons on the reactivity of thiirenium ions, 68–73
THIOUREA
The reactivity of thiourea, alkylthioureas, cysteine, glutathione, S–methylcysteine, and methionine towards N–methyl–N–nitrosoaniline in acid solution, 624–7
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
THIOXOKETONE
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
THIYL
An electron spin resonance study of sulfuranyl radicals of the type $R_2S–SX$ [X = CF_3 or R'C(O)], 1497–504
THREE ELECTRON BOND
Stabilization of oxidized sulfur centers by halide ions. Formation and properties of three–electron–bond R_2SX radicals in aqueous solutions, 758–62
TIN
Tin(IV) ethoxide–catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
The photolysis of cyclopentadienyl compounds of tin and mercury. Electron spin resonance spectra and electronic configuration of the cyclopentadienyl, deuteriocyclopentadienyl, and alkylcyclopentadienyl radicals, 941–8
Substitution at saturated carbon. Part 24. The reactivity of the benzyltin group towards mercury(II) salts in methanol, 1033–6
An electron spin resonance study of the reactivity of alkylchlorotin radicals, $R_nCl_{3-n}Sn·$ (n = 0–3) towards alkenes, alkyl bromides, and biacetyl. The spectra and structures of the alkylchlorotin

TIN(contd)
derivatives of butane-2,3-semidione, $R_nCl_{3-n}SnOCMeCMeO$-, 1488–96
TNT
The stabilities of Meisenheimer complexes. Part 21. Sulfite additions to 2,4,6-trinitrotoluene and 2,4,6-trinitrobenzyl chloride, 1850–3
TOLUENE
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Electrophilic aromatic substitution. Part 24. The nitration of isopropylbenzene, 2- and 4-isopropyltoluene, 1-chloro-4-isopropylbenzene, 4-isopropylanisole, and 2-bromotoluene: nitrodeisopropylation, 1606–16
TOLUENESULFONATE
Secondary deuterium kinetic isotope effects in the solvolysis of 4-tert-butylcyclohexyl and bicyclo[3.2.1]octan-3-yl toluene-p-sulfonates. New results using 50% aqueous ethanol, acetic acid, and 97% aqueous hexafluoropropan-2-ol, 427–31
TOLUIDINIUM
The kinetics of hydrogen-isotope exchange at the nitrogen atom of substituted anilinium ions. Part 2. The nitrosonium-ion-catalyzed reaction, 637–40
TOLYL
Kinetics and mechanism of the denitrosation of nitrosamines in ethanol, 165–9
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
TOLYLETHANOL
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
TOLYLPHOSPHINAMIDE
Hydrolysis of diarylphosphinic amides in acidic solution: steric inhibition and mechanism, 154–60
TOLYLSULFONATE
Synthesis, structure, and reactions of secosteroids containing a medium-sized ring. Part 17. Structure-reactivity relationship in the solvolysis of 5,10-secosteroidal 3-tolylsulfonates, 1356–65
TOLYLSULFONYL
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
TOLYLSULFONYLCYCLOHEXENONE
Hydrogen bonds involving polar carbon-hydrogen groups. Part 7. Electron-deficient cyclohexenones as analogs of carboxylic acid dimers, and the crystal and molecular structure of 5,5-dimethyl-3-methylsulfonylcyclohex-2-enone, 1166–9
TOLYLSULFONYLETHANOL
A conformational study of the 3-p-tolylsulfonylbutan-2-ol and 1,2-diphenyl-2-p-tolylsulfonylethanol diastereoisomeric pairs, 1642–6
TORSION
The torsional barrier in aromatic carbonyl compounds, 363–9
Molecular mechanics calculations for ethers. The conformations of some crown ethers and the structure of the complex of 18-crown-6 with benzylammonium thiocyanate, 1529–43
TRANS
Singlet photosensitization of simple alkenes. Part 1. Cis-trans photoisomerization of cyclooctene sensitized by aromatic esters, 1672–7
TRANSANNULAR
Electro-organic chemistry. Part 3. Transannular interaction and reactions of 5,13-disubstituted [2.2]metacyclophanes: substituent effects on carbon-13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
TRANSFER
Crown ethers as phase-transfer catalysts. A comparison of anionic activation in aqueous-organic two-phase systems and in low polarity anhydrous solutions by perhydrodibenzo-18-crown-6, lipophilic quaternary salts, and cryptands, 46–51
Laser flash photolysis of aromatic azo-hydrazone systems, 286–90
Electron transfer reactions of halogenated aliphatic peroxyl radicals: measurement of absolute rate constants by pulse radiolysis, 296–9
Tin(IV) ethoxide-catalyzed hydride transfer from alcohols to carbonyl compounds, 407–11
Proton transfer from heterocyclic compounds. Part 10. Adenine mono- and polynucleotides, 441–6
Proton transfer from heterocyclic compounds. Part 11. Histidine, histamine, N-acetylhistidine, and histidine-containing peptides, 447–51
Electron-transfer oxidation of organic compounds. Part 5. Oxidation of cyclohexanone by the tris-2,2'-bipyridylruthenium(-III) cation, 557–60
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride; calculation of the cavity terms, 854–9
Activity coefficients and relative partial molal enthalpies of substituted anilines in aqueous perchloric acid solutions, 1271–5
Luminescence characteristics of thiamine derivatives, 1288–92
Kinetic deuterium solvent isotope effects in the pyridine-catalyzed iodination of 2-nitropropane in aqueous and methanolic solutions, 1421–4
Linear free energy relations in the electron-transfer reactions between hydroxydiphenylmethyl radical and electron acceptors, 1708–13
The stabilities of Meisenheimer complexes. Part 22. The ionization of 2,4-dinitroaniline, its N-alkylated derivatives, and 2,6-dinitroaniline in methanol-dimethyl sulfoxide containing sodium methoxide, 1854–8
TRANSITION
The effect of hydroxylic solvents on the solvolysis of tert-butyl chloride; calculation of the cavity terms, 854–9
Nucleophilic addition to ferrocenyl-stabilized carbocations: the nature of the transition state, 1520–8
Metal-ion catalyzed hydrolysis of some β-lactam antibiotics, 1725–32
TRAP
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical-cations in aqueous solution, 647–56
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
TRAPPING
Electron spin resonance studies of radicals formed during the thermolysis and photolysis of sulfoxides and thiolsulfonates, 1141–50
Oxidation of unsaturated aliphatic and arylalkyl alcohols by peroxydisulfate. Intramolecular cyclization of alkoxyl radicals, 1234–7
Homosolvolysis. Part 2. Di-tert-butyl nitroxide as the solvent and 2-methyl-2-nitrosopropane as internally generated spin trap, 1259–61
TRIAMINE
On the mechanism of protonation of triamines, 900–3
TRIARYLMETHANE
The reduction of fluorine-containing triarylmethanols by formic acid, 96–102
TRIAZACYCLOHEXANE
Conformational analysis of saturated heterocycles. Part 94. Applications of photoelectron spectroscopy to molecular properties. Part 3. Photoelectron spectroscopic studies of some 1-oxa-3,4-diaza-, 1-thia-3,4-diaza-, 1,2,4-triaza-, and 1,2,4,5-tetraazacyclohexanes, 91–5
TRIAZENE
Conformational studies by dynamic nuclear magnetic resonance. Part 16. The mechanism of tautomerism in triazenes, 52–5
TRIAZOLO
The use of carbon-13 magnetic resonance chemical shifts and long-range carbon-13-proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
TRIAZOLOPYRIDINE
The use of carbon-13 magnetic resonance chemical shifts and long-range carbon-13-proton coupling constants for assigning the site of glycosylation on nitrogen heterocycles, 1586–91
TRICHLORO
Kinetics of the reactions of silicon compounds. Part 10. Kinetics and mechanism of the gas-phase thermal reactions of trichloro(1-1-difluoroethyl)silane. An intramolecular halogen exchange reaction, 1162–5
TRIFLUOROACETATE
Aggregation of 4-substituted pyridine N-oxide-trifluoroacetates in benzene, 1516–19
TRIFLUOROACETIC
Acid-induced carbon-13 NMR chemical-shift changes of alcohol carbon atoms, 544–9

TRIOXIDE
Aromatic sulfonation. Part 78. Behavior of some α–chloro–substituted 9–methyl–, 9–ethyl–, 9–isopropylanthracenes, and of 1,4,9–trimethylanthracene in dioxane–sulfur trioxide complex in dioxane as sulfonating medium, 904–10
TRIPHENYLENE
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
TRIPLET
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
Photochemistry of o–phthalaldehyde, 724–30
Triplet–state electron spin resonance studies of aryl cations. Part 3. Substituent and medium effects for aminophenyl cations, 768–72
Photochemistry of dienones. Part 7. On the photosensitized isomerization of (E)–β–ionone and its isomeric α–pyran. Evidence for exciplex formation between the α–pyran and fluoren–9–one, 1057–62
TRIPTYCENE
Kinetics and mechanism of mercuriation of aromatic compounds by mercury trifluoroacetate in trifluoroacetic acid, 267–72
Stereoisomers of hydrogenated triptycene: a joint crystallographic and conformation study of a set of strained hydrocarbon molecules, 523–9
TRITYL
Synthesis and x–ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
TRITYLMETHYLPHOSPHONIUM
Synthesis and x–ray crystal structure of (triphenylmethyl)trimethylphosphonium tetrafluoroborate, 117–20
TROPOELASTIN
Nuclear magnetic resonance and conformational energy calculations of repeat peptides of tropoelastin: conformational characterization of the cyclododecapeptide, 1119–30
TYPE
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
TYROSINE
Hydrogen–deuterium exchange of the C–2 protons of histidine and histidine peptides and proteins, 693–9
UNIMOL
Ion–dipole interactions in the unimolecular reactions of isolated organic ions: some isomers of $C_nH_{2n+1}O^+$, 1411–14
UNSATD
Photochemistry of acylic βγ–unsaturated ketones. Part 4. The effect of α–methyl substitution with some hex–4–en–2–ones and 1–phenylpent–3–en–1–ones, 592–7
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
UREA
Mechanistic studies in the chemistry of urea. Part 4. Reactions of urea, 1–methylurea, and 1,3–dimethylurea with benzil in acid solution, 103–5
Mechanistic studies in the chemistry of urea. Part 5. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with 1–phenylpropane–1,2–dione in acid solution, 106–9
Mechanistic studies in the chemistry of urea. Part 6. Reaction of urea, 1–methylurea, and 1,3–dimethylurea with acetophenone in acid solution, 229–31
Mechanistic studies in the chemistry of urea. Part 7. Reaction with acetone and mesityl oxide, 232–4
Oxidation of hydroxylamine derivatives. Part 5. Anodic oxidation of N–hydroxy– and N–alkoxyureas, 1022–7
The absence of nucleophilic catalysis in the nitrosation of amides. Kinetics and mechanism of the nitrosation of methylurea and the reverse reaction, 1372–5
URETHANE
Barriers to rotation about the amide (N–CO) and sulfenamide (N–S) bonds in methyl N–arylsulfenyl–N–benzylurethanes. A simple molecular orbital model to explain substituent effects on sulfenamide rotational barriers, 317–25
UV
Kinetic and spectroscopic studies with a rapid–scanning spectrometer. Part 2. Intermediates in the one–equivalent metal ion oxidation of phenothiazine and phenoxazine, 291–5
Interaction between the carbonyl group and a sulfur atom. Part 9. The relationship between conformation and ground– and excited–state interactions in some α–sulfur–substituted cycloalkanones, 453–6
Structure, and infrared and ultraviolet spectra of protonated dimethylacetamide, 500–3
The optical activity of the pyridine chromophore: MO analysis of the circular dichroism spectrum of 5α–cholest–2–eno[3,2–b]pyridine, 598–602
Molecular conformation and electronic structure of azomethines. Part 6. Electronic spectra of N–benzylidenemethylamines, 849–53
Benzoquinones and related compounds. Part 2. Preferred conformations of some acyl–1,4–benzoquinones in solution, 860–6
Indolyl alkali–metal ion pairs in the excited state. Part 2. The influence of temperature on the position of the counterion, 1647–51
The luminescence of bisbenzyltetrahydroisoquinoline alkaloids. The berbamine and oxyacanthine alkaloids, 1696–700
β–Thioxoketones. Part 6. Electronic absorption spectra of aromatic β–thioxoketones. A study of enol–enethiol tautomerism, 1768–73
VANCOMYCIN
A proton nuclear magnetic resonance study of the interactions of vancomycin with N–acetyl–D–alanyl–D–alanine and related peptides, 1262–70
VAPOR
Phase equilibria of binary systems containing crystalline inclusion compounds. Part 1. The perhydrotriphenylene–n–heptane system 1406–10
VERRUCOSANE
The structure and absolute configuration of (–)–2β,9α–dihydroxyverrucosane isolated from the liverwort Mylia verrucosa: x–ray analysis of the mono–p–bromobenzoate, 763–7
VINCANE
Circular dichroism. 71. Circular dichroism of indole alkaloids. Part 1. Vincane derivatives, 701–3
VINYL
Radical addition to alkynes: electron spin resonance studies of the formation and reactions of vinyl radicals, 273–8
Electron spin resonance studies. Part 58. The formation and reactions of some aliphatic radical–cations in aqueous solution, 647–56
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
High–pressure kinetics of electron donor–acceptor complex formation and cycloaddition between tetracyanoethylene and enol ethers, 1596–600
VINYLCYCLOHEXENE
An empirical determination of carbon–13 nuclear magnetic resonance spectra of terpene isomers generated by isoprene cyclodimerization, 1385–90
VINYLPYRROLIDINONE
The kinetics and mechanism of the acid–catalyzed hydrolysis of N–vinylpyrrolidin–2–one, 825–8
VISBANINE
Structure and absolute configuration of vibsanine E isolated from leaves of Viburnum odoratissimum Ker, 1701–3
VISIBLE
Studies on nitroaromatic compounds. Part 8. A kinetic and spectroscopic study of the reaction of di– and triethylamine with 1,5–dimethyl–2,4,8–trinitronaphthalene, 132–8
Protonation equilibriums of 1–arylazo–4–naphthols and 1–arylazo–4–methoxynaphthalenes, 628–31
VOLTAMMETRY
Electro–organic chemistry. Part 3. Transannular interaction and reactions of 5,13–disubstituted [2.2]metacyclophanes: substituent effects on carbon–13 NMR spectra, cyclic voltammetric peak potentials, and anodic oxidation, 561–8
Electrochemical formation of dianions from unsaturated cyclophanes, 1301–5
WATER
A theoretical investigation on the energy and structure of ion–molecule pairs in polar solvents. Part 1. Benzenediazonium cation in water, 493–9
A hydrogen–bonded complex. The crystal structure of 1,5,12,16,23,-26,29–heptaoxa[^{7,3,14}][5.5]orthocyclophane–naphthalene–2,3–diol monohydrate, 1253–8
Kinetics and mechanism of cyclization of N–(methylaminocarbony-

WATER(contd)
l)glycine to 3–methylimidazolidine–2,4–dione, 1752–6
Vibrational analysis of a model for the hydroxide ion in aqueous solution, 1840–6
WEAK
Homosolvolysis, 260–6
WILLIAMSON
Ring–closure reactions. Part 15. Solvent effects on cyclic aralkyl ether formation by intramolecular Williamson synthesis, 1774–7
WT
Aggregation behavior of synthetic peptide surfactants, 1809–15
XANTHENE
Cobalt metallocycles. Part 9. Some reactions of cobaltaindene, cobaltafluorene, cobaltaxanthene, and cobaltacyclopentane complexes, 1344–9
XANTHINE
Chemical reactivity and electronic structure of N–methyl derivatives of xanthine, 1293–6
XYLENE
A study of the inclusion properties of 1,2–bis(diphenylphosphinoselenoyl)ethane and related host molecules, 993–8
XYLIDINIUM
The kinetics of hydrogen–isotope exchange at the nitrogen atom of substituted anilinium ions. Part 1. The acid–catalyzed reaction, 632–6
YIELD
Photochemistry of α–substituted cyclohexanones. Chemistry of the intermediate type II biradicals, 56–60
YTTRIUM
An electron spin resonance investigation of the reduction of o–diaroylbenzenes by Group III metals, 1788–91
ZINC
Mechanisms of antioxidant action. Part 2. Reactions of zinc bis[O,O–dialkyl(aryl)phosphorodithioates] and related compounds with hydroperoxides, 1006–16

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Title.—The choice of a title for a paper is of the greatest importance, since it is from the title that the important key-words used in information retrieval are taken. Not only should the title clearly and accurately indicate the content of that paper but also it should be as specific as the content and emphasis of the work permits. Brevity in a title, though desirable, should be balanced against its accuracy and usefulness.

Abbreviations, symbols, and formulae are generally not permitted, and it is usual to spell out terms where necessary.

Reference to the preceding part of a series must be made as the reference (numbered 1) to the title in the form: 'The Chemistry of Vitamin B_{12}. Part VIII.[1] Controlled Potential Reduction of Vitamin B_{12a}.' [Reference to a preceding part in the references is in the form: Part VII, H. A. O. Hill, B. E. Mann, J. M. Pratt, and R. J. P. Williams, *J. Chem. Soc.* (*A*), 1968, 564. If the page number is unknown because the paper has still to be accepted, or is in the press, the paper number should be given.]

Summary.—Every paper for the *Journal* must be accompanied by a summary (50—250 words) setting out briefly and clearly the objects and results of the work. The summary should give a reader a clear idea of what the work has achieved and should be *independent* of the main text. This last point is of particular importance in connection with the names of compounds which, although they may be accompanied by a number which refers to a displayed formula in the body of the text, must be comprehensible without reference to this formula. Thus,

> Apetalactone, a new triterpene lactone isolated from *Calophyllum apetalum* Willd. has been shown to be 4,28-dihydroxy-3,4-secofriedelan-3-oic acid lactone (IIa).
>
> or
>
> Reaction of sodium hydride with ω-hydroxyalkyltriphenylphosphonium salts $Ph_3P^+[CH_2]_nOH\ X^-$ (I) has been investigated. The salt (I; $n = 1$, X = I) gave triphenylphosphine and formaldehyde. The salt (I; $n = 2$, X = I) gave triphenylphosphine oxide and ethylene. Similar reactions were carried out with ω-hydroxyalkyltriphenylarsonium (XIV) and ω-hydroxyalkyldimethylphenylammonium (XV) salts.

The summary should concern only the main subject of the work and its main conclusions; details of an involved argument or synthesis should not be included and, although classes of compounds prepared or discussed should be given rather than a list of compounds, key compounds in the work should be referred to.

Introduction.—This should give clearly and briefly, with relevant references, both the nature of the problem under investigation and its background.

Results and Discussion.—It is usual for the results to be presented first, and for them to be followed by a discussion of their significance. Only relevant results should be presented, and figures, tables, and equations should be used only for purposes of clarity and brevity. Data must not be reproduced in more than one form, *e.g.* in both figures and tables.

Experimental Section.—Descriptions of experiments should be given in detail sufficient to enable experienced experimental workers to repeat them; the degree of purity of materials should be given, as should the relative quantities used. Descriptions of established procedures are unnecessary. Standard techniques and methods used throughout the work should be stated at the beginning of the section. Apparatus should be described only if it is non-standard; commercially available instruments are referred to by their stock numbers (*e.g.* Perkin-Elmer 137 or Unicam SP 500 spectrophotometers). The accuracy of primary measurements should be stated. Unexpected hazards encountered during the experimental work should be noted. The detailed treatment of the Experimental section is dealt with in a forthcoming Notice to Authors.

Acknowledgements.—Contributors, other than co-authors, are acknowledged in a separate paragraph at the end of the paper; acknowledgements should be as brief as possible. Titles, Mr., Mrs., Miss, Dr., Professor, *etc.*, are given; degrees are not given. Organizations which operate on a commercial basis are not acknowledged.

Bibliographic References.—These are given on a separate sheet at the end of the manuscript and are referred to in the text by superior roman numerals. They must be distinguished from footnotes which are given at the bottom of the page to which they refer; they are referred to by an asterisk (*), dagger (†), *etc.* Bibliographic references and footnotes are the subject of Notice No. 3.

General Detail

Type Size.—It should be noted that since the Experimental section and the results are printed in smaller type than the theoretical part, division between the two should be clear-cut and frequent alternation is not advisable.

Brevity.—Because of the large volume of work submitted for publication, brevity in the presentation of papers is essential and, for this reason, certain tendencies are discouraged; these are as follows:

(*a*) Unnecessary division of work into separate parts of a series. Papers are in no way discouraged solely on grounds of length.
(*b*) Submission of fragmentary work when this can be included in a larger communication.
(*c*) Historical introductory paragraphs in cases when a simple statement of the accepted present position suffices.
(*d*) Undue elaboration of hypotheses.
(*e*) Over-detailed and verbose exposition of ideas.
(*f*) Excessive use of diagrams, for example, straight-line plots that can be adequately expressed as an equation together with, if necessary, a table of deviations.
(*g*) Duplication of data as between text, tables, and figures, *etc.*

(*h*) Details of the preparation of simple derivatives such as esters, ethers, semicarbazones, *etc.*, and slight variations of essentially the same technique. (Unless the conditions are critical, quantities are superfluous, and only an indication of reagents and/or conditions is required.)

Spelling.—Standard English spelling is used (*Oxford English Dictionary*), although latitude with respect to alternative spellings for certain words is allowed. Where one form or the other of a particular spelling is adopted it should be used consistently throughout a paper.

Punctuation.—Although punctuation follows standard English practice, the following conventions are observed:

(*a*) A comma is placed before ' and ' or ' or ' in a series such as ' oxygen, sulphur, and selenium ' or ' $\lambda_{max.}$ 257, 295, and 343 nm.'

(*b*) Parentheses, square brackets, and braces are used, as necessary, in that order, *i.e.* {[( )]}.

(*c*) When a word is followed by a punctuation mark the parenthetical phrase must be inserted before the latter, *e.g.* ' m.p. 234° (decomp.),' and not ' m.p. 234°, (decomp.)'.

(*d*) A colon is used to separate a ratio, as in 1 : 20 —not a solidus 1/20.

(*e*) Parenthetical expressions of the same physical quantity in different units are separated by a comma (3·9 g, 0·1 mol) (30 ml, 1 mol); expressions of different physical quantities are separated by a semicolon (2·9N; 30 ml) (*d* 0·88; 8 ml).

Hyphenation.—Hyphens are used for two purposes: to divide and to compound.

Division. It is common practice to divide words, particularly when in a sequence, when one part is common to several of the words; in such cases, the hyphen, representing the point of attachment to the common part, is always inserted, *e.g.* ' the chloro-, bromo-, and fluoro-naphthacenes,' ' the *o-*, *m-*, or *p*-nitrotoluenes,' or ' the oxo-naphthalenes and -naphthacenes.' It is not good practice, however, to detach both a common prefix and a common suffix in a series, *e.g.* ' the dihydroxy- naphthalene- and phenanthrene-diones,' since confusion can arise.

' Sections ' of class names such as diazo-ketone, alkyl-diamine, epoxy-nitro-sulphone, *etc.*, are linked by hyphens.

It is also Society usage to insert a hyphen after a prefix which ends in a vowel or y; the hydroxy-group, the aza-function, the carboxy-compounds, the nitro-derivatives, but the methyl group (note that hydroxy, acetoxy, carboxy, ethoxy, and methoxy are used and not hydroxyl, acetoxyl, carboxyl, ethoxyl, and methoxyl).

It is customary to separate a pair of the same letter when these letters (in the same fount) would not naturally fall together, *e.g.* butyl-lithium, iodo-octane.

Compounding. A hyphen is often necessary when words are compounded to form a single modifying adjective to precede the noun being modified, thus: ' a melting-point determination ' or ' a free-radical chain mechanism.' A hyphen is not needed when adverbs are compounded, as in ' an electrically heated oven,' or for two-word chemical names such as ' nitric acid solution.'

Miscellaneous uses of hyphens. Hyphens are used to set apart numbers, configurational letters, Greek letters, and italicized prefixes: 1,2,5-trimethylcyclohexane, D-*gluco*-hexose, *s*-trinitrobenzene, β-chlorophenethylbenzene, tri-μ-carbonyl-bis(tricarbonyliron), and 3-methylpent-*trans*-2-ene.

Use of Italics.—As described below, italics are indicated in a typescript by single underlining. Particular attention should be paid to the following uses.

(*a*) Foreign words and phrases and Latin abbreviations are given in italics: *e.g.*, *in toto*, *in vivo*, *ca.*, *cf.*, *i.e.*, *etc.*

(*b*) In the names of chemical compounds or radicals italics are used for prefixes (other than numerals or symbols) when they define the position of named substituents, or when they define stereoisomers: other prefixes are printed in roman. (*Note:* Initial capital letters are not to be used with italic prefixes or single-letter prefixes: full points are not to be associated with letter prefixes.)

o-, *m-*, and *p*-nitrotoluenes, but *ortho-*, *meta-*, and *para*-compounds (*o-*, *m-*, and *p-* are used only with specific names; *ortho-*, *meta-*, and *para-* are used with classes), *s*-trinitrobenzene, *NN*-dimethylaniline, *trans-* and *cis*-hexane-1,2-diol, *gem-* and *vic*-diols, benzil *anti*-oxime, 3-*O*-methyl-L-*glycero*-tetrulose.

At the beginning of a sentence the first roman letter after the prefix is capitalized: ' D-*glycero*-D-*gluco*-Heptose was subjected . . . ' and ' β-*p*-Tolylchalcone gave . . . '

(*c*) The scientific names of genera, species, and varieties are italicized.

(*d*) In references to periodicals their names or abbreviations are set in italics.

Note: Greek letters are not italicized, and should not therefore be underlined in typescripts.

Headings.—(*a*) Main sections (Experimental, Discussion, *etc.*): side-heading, small capitals, no final fullstop.

(*b*) Main side-heading: italics, initial capital letter for each noun and adjective, final fullstop and dash.

(*c*) Subsidiary side-heading: italics, first initial capital only, final fullstop but no dash.

(*d*) Further subdivision: by italic (*a*), (*b*), *etc.* (no following fullstop), and finally (i), (ii), *etc.* If (a), (b), *etc.* are used in front of a subsidiary side-heading, then for contrast these letters are not italicized.

Letters and prefixes which are ordinarily printed in italics are transferred for contrast into roman type in italicized phrases (see example below, where *O*-alkyl becomes O-*alkyl*).

Physicochemical symbols, however, remain in their prescribed form, and numerals and Greek letters are not italicized.

Examples:

EXPERIMENTAL

Preparation of Aliphatic Aldoximes and Ketoximes.—Acetoxime O-*alkyl ethers.* (*a*) Acetoxime (100 g) was dissolved . . .

Density (*d*) *of the Alcohol at* 295 K.—The series of aliphatic alcohols . . .

Note: In the above examples it should be noted that the type of print required to indicate italics, capitals, small capitals, *etc.* is shown by underlining; this convention must be strictly adhered to, *i.e.*

Single underlining for *italic* type
Double underlining for SMALL CAPITALS
Treble underlining for ORDINARY CAPITALS
Wavy underlining for **bold black** type

NOTICES TO AUTHORS—No. 3/1968

Bibliographic References and Footnotes

A clear distinction is made between bibliographic references and footnotes. The latter are used to present material which, if included in the body of the text, would disrupt the flow of the argument but which is, nevertheless, of importance in qualifying or amplifying the textual material. Such footnotes are referred to with the following symbols: *, †, ‡, §, ¶, ‖, *etc.* [*Note:* Since an asterisk is used to indicate the author to whom correspondence should be addressed, its use early on in a paper is not advised; a dagger (†) is preferred.]

Bibliographic References.—Reference to the source of statements in the text is made by use of *superior numerals* at the appropriate place. The references themselves are given as footnotes at the bottom of the corresponding page in the final printed text. It is thus *essential* that bibliographic references are numbered in the order in which they will appear.

When citation of a paper is repeated the numeral previously given to that reference is to be used also at the second citation; the footnote is not repeated.

The position of the superior numeral should be chosen with care, particularly when it does not follow an author's name. If placed adjacent to punctuation, the numeral should normally be placed after the punctuation mark, *e.g.* 'This compound was shown to be the dienone,[3] which . . . '. It may be necessary to modify this rule, however, to avoid confusion, thus: ' In this way the method was found to be suitable for lead[2], tin[3], bismuth[4], and mercury[5]. '

Particular care is necessary where a reference number is likely to be confused with a superscript numeral indicating a power index: ' . . . which gave a value of 2·3 cm^3 . . . ' should be written as ' . . . which gave a value[3] of 2·3 cm ' or ' . . . which gave a value of 2·3 cm (ref. 3) '.

Since it is usually difficult to print a table in a given position in the text, references within the table are best dealt with by taking the individual references into the printed footnotes to the tables and using a new reference number sequence therein. Should the references cited in the tables appear much earlier in the text, these earlier reference numbers may be used.

Journals. New instructions for the abbreviation of journal titles will be issued early in 1980. At the present time where authors have difficulty in deciding on a suitable journal abbreviation they are invited either to write directly to the Editors or to consult current copies of the *Journal.*

Books. Titles of books are cited in quotation marks, in upright letters, and the author(s), title, publisher, town, date (or edition, if more than one has been published), and page number (if required) must be given in that order:

C. J. M. Stirling, ' Radicals in Organic Chemistry,' Oldbourne Press, London, 1965, p. 69.

T. J. Suen, in ' Polymer Processes,' ed. C. E. Schildknecht, Interscience, New York, 1956, vol. X, p. 295.

Patents. Patents should be indicated in the form: B.P. 367,450, 367,455-7. U.S.P. 1,171,230. G.P. 436,112-4. Jap.P. 20,101. Dates are indicated thus: B.P. 666,776/1956. Patents which are applied for must always be given a year, *e.g.* B.P. Appl. 102/1968.

Reports and Bulletins, etc.

R. A. Allen, D. B. Smith, and J. E. Hiscott, ' Radioisotope Data,' UKAEA Research Group Report AERE-R 2938, H.M.S.O., London, 1961.

' Collected Papers on Methods of Analysis for Uranium and Thorium,' Geological Survey Bulletin 1006, U.S. Government Printing Office, Washington D.C., 1954.

Material presented at meetings.

N. N. Greenwood, Abstracts, Anniversary Meeting of the Chemical Society, Glasgow, 1965, C1.

N. S. Anderson and D. A. Rees, in ' Proceedings of the Vth International Seaweed Symposium,' ed. E. G. Young and J. L. McLachlan, Pergamon Press, Oxford, 1966, p. 405.

Theses.

A. D. Mount, Ph.D. Thesis, University of London, 1967.

Reference to unpublished material. For material presented at a meeting, congress, or before a society, *etc.*, but not published, the following form is used:

[1] A. R. Jones, presented in part at the XXth Congress of the International Union of Chemistry, Paris, September, 1960.

For material accepted for publication, but not yet published, the following form is used:

[2] A. R. Jones, *J. Amer. Chem. Soc.*, in the press.

If the paper has been submitted to the Society, the paper number should be given:

[3] A. R. Jones, *J. Chem. Soc.* (*A*), in the press (8/556).

For material submitted for publication but not yet accepted the following form is used:

[4] A. R. Jones, submitted for publication in *Angew. Chem.*

For personal communications the following form is used:

[5] G. B. Ball, personal communication. (*Note:* the form, G. B. Ball, private communication, is inappropriate.)

If material is to be published but has yet to be submitted the following form is used:

[6] Unpublished data.

Names.—The names and initials of all authors are always given in the reference footnote; they must not be replaced by the phrase *et al.* This does not prevent some, or all, of the names being mentioned at their first citation in the cursive text: initials are not necessary in the text.

For Chinese and Spanish authors all names should be given as in the original, since the patronymic is not always given last in these languages. If co-authors are to be collectively cited, as in 'Smith and his co-workers' or 'Smith *et al.*,' the latter form is inappropriate unless the individual name 'Smith' appears first among the authors named in the original.

Composite References.—Whenever possible, composite references should be used rather than a series of individual references. The style for composite references is as follows:

[1] A. B. Jones, *J. Chem. Soc.* (*A*), 1967, 234.

[2] A. B. Jones, *J. Chem. Soc.* (*A*), 1966, 123; 1967, 234.

[3] A. B. Jones, *J. Chem. Soc.* (*A*), 1966, 123; *J. Amer. Chem. Soc.*, 1956, 78, 1234.

[4] A. B. Jones, *J. Chem. Soc.*, 1956, 234; A. B. Jones and C. D. Brown, *J. Chem. Soc.* (*B*), 1967, 234, 1077; 1968, 599.

[5] A. B. Jones, *J. Amer. Chem. Soc.*, 1956, 78, 1234; A. B. Jones and C. D. Brown, *ibid.*, 1957, 79, 567; A. B. Jones and E. F. Green, *ibid.*, p. 999.

If only one paper from a composite reference is required for citation later, then two numbers may be assigned to the first citation (*e.g.* Jones [1,2]); alternatively, long composite references may be divided by letters, *e.g.*:

(*a*) A. B. Jones, *J. Chem. Soc.* (*A*), 1954, 467; (*b*) A. B. Jones and C. D. Brown, *J. Chem. Soc.* (*B*), 1967, 234.

A. B. Jones, *J. Chem. Soc.* (*A*), (*a*) 1953, 267; (*b*) 1954, 1742; (*c*) *etc.*

A composite reference may cite a previous reference in the form:

[12] A. B. Jones, *J. Chem. Soc.*, 1956, 234; C. D. Brown, ref. 5.

(*Note: ibid.* is used only within a given reference and not to refer from one reference number to another: the abbreviated title for the journal should be repeated for separate reference numbers.)

Idem, loc. cit., and *op. cit.* are not used in references.

NOTICES TO AUTHORS—No. 4/revised 1979

Journal Abbreviations

The Publications and Information Board has decided that the style of journal abbreviations to be used in The Society's publications shall in future be that defined by the Chemical Abstracts Service in CASSI.* The abbreviations listed in CASSI are based upon internationally recognised systems.

As from January 1981, the CASSI system will be the only one used in The Society's publications. The following list of CASSI-style abbreviations covers most of the journals received in The Society's library. It is not, of course, a full list; CASSI (1974 edition) plus its quarterly supplements run to more than 2000 pages.

If you cannot locate an authoritative abbreviation for a journal, and if it is not obvious how the title should be abbreviated, please cite the full title.

This change in style of abbreviations does not involve any change in the order in which the bibliographic details should be cited; they should still be given in the order: YEAR, VOLUME, PAGE.

Acc. Chem. Res.
Acta Acad. Aboensis, Ser. B
Acta Biochim. Biophys. Acad. Sci. Hung.
Acta Biochim. Iran.
Acta Biochim. Pol.
Acta Chem. Scand., Ser. A
Acta Chem. Scand., Ser. B
Acta Chim. Acad. Sci. Hung.
Acta Crystallogr.
Acta Metall.
Acta Phys. Acad. Sci. Hung.
Acta Phys. Chem.
Acta Vitaminol. Enzymol.
Adv. Act. Anal.
Adv. Alicyclic Chem.
Adv. Anal. Chem. Instrumen.
Adv. Carbohydr. Chem. Biochem.
Adv. Catal.
Adv. Chem. Phys.
Adv. Chromatogr.
Adv. Colloid Interface Sci.
Adv. Enzymol. Relat. Areas Mol. Biol.
Adv. Free-Radical Chem.
Adv. Heterocycl. Chem.
Adv. Inorg. Chem. Radiochem.
Adv. Lipid Res.
Adv. Macromol. Chem.
Adv. Magn. Reson.
Adv. Molten Salt Chem.
Adv. Organomet. Chem.
Adv. Org. Chem.
Adv. Photochem.
Adv. Phys. Org. Chem.
Adv. Protein Chem.
Adv. Quantum Chem.
Adv. Struct. Res. Diffr. Methods
Afinidad
Agric. Biol. Chem.
Agrokem. Talajtan
AIChE J.
Ambix
Am. J. Pharm.
Am. J. Sci.
An. Acad. Bras. Cienc.
Anal. Biochem.
Anal. Chem.
Anal. Chim. Acta
Anal. Lett.
Analusis
Analyst (London)
An. Bromatol.
Angew. Chem.
Angew. Chem., Int. Ed. Engl.
Angew. Makromol. Chem.
Ann. Acad. Sci. Fenn., Sect. AII, Chem.
Ann. Chim. (Paris)
Ann. Chim. (Rome)
Ann. Endocrinol.
Ann. N.Y. Acad. Sci.
Ann. Pharm. Fr.
Ann. Soc. Sci. Bruxelles
Ann. Univ. Mariae Curie-Sklodowska, Sect. AA
Annu. Rep. Anal. At. Spectrosc.
Annu. Rep. Med. Chem.
Annu. Rep. Prog. Chem., Sect. A, Phys. Inorg. Chem.
Annu. Rep. Prog. Chem., Sect. B.
Annu. Rev. Biochem.
Annu. Rev. Ind. Eng. Chem.
Annu. Rev. NMR Spectrosc.
Annu. Rev. Phys. Chem.
Appl. Spectrosc.
Arch. Pharm. Chemi, Sci. Ed.
Arch. Pharm. (Weinheim, Ger.)
Arm. Khim. Zh.
Arzneim.-Forsch.
Aspects Homogeneous Catal.
At. Absorpt. Newsl.
Aust. J. Biol. Sci.
Aust. J. Chem.
Aust. J. Phys.
Azerb. Khim. Zh.

Ber. Bunsenges. Phys. Chem.
Biochem. Biophys. Res. Commun.
Biochem. Educ.
Biochemistry
Biochemistry (Engl. Transl.)
Biochem. J.
Biochem. Pharmacol.
Biochem. Prep.
Biochem. Soc. Trans.
Biochim. Biophys. Acta
Biochimie
Biofizika
Bioinorg. Chem.
Biokhimiya
Bioorg. Chem.
Bioorg. Khim.
Biopolymers
Biotechnol. Bioeng.
Bocku-Kagaku
Boll. Soc. Ital. Biol. Sper.
Bol. Soc. Quim. Peru
Br. Corros. J.
Br. J. Pharmacol.
Br. Polym. J.
Br. Polym. J.
Bul. Inst. Politeh. Iasi.
Bull. Acad. Pol. Sci., Ser. Sci. Chim.
Bull. Acad. Sci. USSR, Div. Chem. Sci.
Bull. Chem. Soc. Jpn.
Bull. Inst. Chem. Res., Kyoto Univ.
Bull. Sci., Cons. Acad. Sci. Arts RSF Yougosl., Sect. A
Bull. Soc. Chim. Belg.
Bull. Soc. Chim. Fr.
Bunseki Kagaku

Can. J. Biochem.
Can. J. Chem.
Can. J. Chem. Eng.
Can. J. Pharm. Sci.
Can. J. Phys.
Can. J. Spectrosc.
Carbohydr. Res.
Carbon
Catal. Rev.
Cellul. Chem. Technol.
Cereal Chem.
Cesk. Farm.
Chelates Anal. Chem.
Chem. Age (London)
Chem. Anal. (Warsaw)
Chem. Ber.
Chem. Br.
Chem. Can.
Chem. Chron.
Chem. Econ. Eng. Rev.
Chem. Eng. Commun.
Chem. Eng. J. (Lausanne)
Chem. Eng. (London)
Chem. Eng. News
Chem. Eng. Progr.
Chem. Eng. Progr., Monogr. Ser.
Chem. Eng. Progr., Symp. Ser.
Chem. Eng. Sci.
Chem. Erde
Chem. Heterocycl. Compd. (Engl. Transl.)
Chem. Ind. (Deusseldorf)
Chem. Ind. Int. (Engl. Transl.)
Chem. Ind. (London)
Chem.-Ing.-Tech.
Chem. Listy
Chem. Nat. Compd. (Engl. Transl.)
Chem. N. Z.
Chem. Pharm. Bull.
Chem. Phys.
Chem. Phys. Carbon
Chem. Phys. Lett.
Chem. Phys. Lipids
Chem. Prum.
Chem. Rev.
Chemsa
Chem. Scr.
Chem. Soc. Rev.
Chem. Soc., Spec. Publ.
Chem. Stosow.
Chem. Tech. (Leipzig)
Chem. Technol.
Chem. Week
Chem. Weekbl.
Chem.-Ztg.
Chem. Zvesti
Chim. Acta Turc.
Chim. Actual.
Chimia
Chim. Ind. (Milan)
Chromatographia
Clin. Biochem.
Clin. Chem. (Winston-Salem, N. C.)
Clin. Chim. Acta
Collect. Czech. Chem. Commun.
Colloid J. USSR (Engl. Transl.)
Colloid Polym. Sci.
Combust. Flame
Commun. Fac. Sci. Univ. Ankara
Commun. R. Soc. Edinburgh, Phys. Sci.
Comput. Chem.
Coord. Chem. Rev.
Corrosion Sci.
Cosmet. Perfum.
CRC Crit. Rev. Biochem.
C.R. Hebd. Seances Acad. Sci.
Crit. Rev. Anal. Chem.
Croat. Chem. Acta
C.R. Seances Soc. Biol. Ses Fil.
Curr. Sci.

DEFAZET-Dtsch. Farben-Z.
Denki Kagaku Oyobi Kogyo Bulsuri Kagaku
Dokl. Akad. Nauk Arm. SSR
Dokl. Akad. Nauk SSSR
Dokl. Bolg. Akad. Nauk
Dokl. Chem. (Engl. Transl.)
Dokl. Chem. Technol. (Engl. Transl.)
Dokl. Phys. Chem. (Engl. Transl.)
Dopo. Akad. Nauk Ukr. RSR, Ser. B
Double-Liaison
Dtsch. Lebensm. -Rundsch.
Dyn. Mass Spectrom.

Educ. Chem.
Egypt. J. Chem.
Electroanal. Chem.
Electrochim. Acta
Elektrokhimiya
Endeavour
Environ. Sci. Technol.
Erdoel Kohle, Erdgas, Petrochem. Brennst. -Chem.
Essays Biochem.
Eur. J. Biochem.
Eur. Polym. J.
Experientia

Faraday Discuss. Chem. Soc.
Faraday Symp. Chem. Soc.
FEBS Lett.
Fermentn. Spirt. Prom.
Fette, Seifen. Anstrichm.
Finn Chem. Lett.
Fiz. -Khim. Mekh. Mater.
Fiz. Met. Metalloved.
Flavour Ind.
Fluorine Chem. Rev.
Food Manuf.
Fortschr. Chem. Org. Naturst.
Fortschr. Hochpolym. -Forsch.
Freseniusz Z. Anal. Chem.
Fuel

Gazz. Chim. Ital.
Gen. Cytochem. Methods
Geokhimiya
Ger. Chem. Eng. (Engl. Transl.)
Gidrokhim. Mat.
Glas. Hem. Drus., Beograd
Glass Technol.
G. Microbiol.
God. Vissh. Khimikotekhnol. Inst., Sofia
Grasas Aceites (Seville)

Helv. Chim. Acta
High Energy Chem. (Engl. Transl.)
Hist. Stud. Phys. Sci.
Hoppe-Seyler's Z. Physiol. Chem.
Hua Hsueh
Hua Hsueh Hsueh Pao
Hua Hsueh Tung Pao
Hung. J. Ind. Chem.
Hwahak Kwa Kongop Ui Chinbo

Ind. Eng. Chem., Fundam.
Ind. Eng. Chem., Process. Res. Dev.
Ind. Eng. Chem., Prod. Res. Dev.
Indian J. Agric. Chem.
Indian J. Biochem. Biophys.
Indian J. Chem., Sect. A
Indian J. Chem., Sect. B.
Indian J. Pure Appl. Phys.
Ind. Lab. (Engl. Transl.)
Inorg. Chem.
Inorg. Chim. Acta
Inorg. Mater. (Engl. Transl.)
Inorg. Nucl. Chem. Lett.
Inorg. Synth.
Int. Chem. Eng.
Int. Flavours Food Addit.
Int. J. Appl. Radiat. Isot.
Int. J. Chem. Kinet.
Int. J. Mass Spectrom. Ion Phys.
Int. J. Pept. Protein Res.
Int. J. Quantum Chem.
Int. J. Quantum Chem., Symp.
Int. J. Sulfur Chem.
Int. J. Vitam. Nutr. Res.
Intra-Sci. Chem. Rep.
Inz. Chem.
Ion Exch. Solvent Extr.
Isr. J. Chem.
Istanbul Univ. Fen Fak. Mecm., Seri C
Ital. J. Biochem.

* Chemical Abstracts Service Source Index.

Itsuu Kenkyusho Nempo
Izv. Akad. Nauk Kaz. SSR, Ser. Khim.
Izv. Akad. Nauk SSSR, Neorg. Mater.
Izv. Akad. Nauk SSSR, Ser. Khim.
Izv. Akad. Nauk Turkm. SSR, Ser. Fiz. -Tekh., Khim. Geol. Nauk
Izv. Sib. Otd. Akad. Nauk SSSR, Ser. Khim. Nauk

J. Agric. Food Chem.
J. Am. Chem. Soc.
J. Am. Leather Chem. Assoc.
J. Am. Oil Chem. Soc.
J. Anal. Chem. USSR (Engl. Transl.)
J. Appl. Chem. Biotechnol.
J. Appl. Chem. USSR (Engl. Transl.)
J. Appl. Crystallogr.
J. Appl. Polym. Sci.
J. Assoc. Off. Anal. Chem.
J. Assoc. Public Anal.
J. Biochem. (Tokyo)
J. Biol. Chem.
J. Carbohydr., Nucleosides, Nucleotides
J. Catal.
J. Chem. Educ.
J. Chem. Eng. Data
J. Chem. Inf. Comput. Sci.
J. Chem. Phys.
J. Chem. Res. (M)
J. Chem. Res. (S)
J. Chem. Soc., Chem. Commun.
J. Chem. Soc., Dalton Trans.
J. Chem. Soc., Faraday Trans. 1
J. Chem. Soc., Faraday Trans. 2
J. Chem. Soc., Perkin Trans. 1
J. Chem. Soc., Perkin Trans. 2
J. Chem. Thermodyn.
J. Chim. Phys. Phys. Chim. Biol.
J. Chin. Chem. Soc. (Taipei)
J. Chromatogr.
J. Chromatogr. Sci.
J. Colloid Interface Sci.
J. Coord. Chem.
J. Cryst. Mol. Struct.
J. Doc.
J. Electroanal. Chem. Interfacial Electrochem.
J. Electrochem. Soc.
J. Electrochem. Soc. India
J. Fac. Sci. Univ. Tokyo
J. Fluorine Chem.
J. Food Sci.
J. Franklin Inst.
J. Gen. Chem. USSR (Engl. Transl.
J. Hazard. Mater.
J. Heterocycl. Chem.
J. Histochem. Cytochem.
J. Indian Chem. Soc.
J. Indian Inst. Sci.
J. Inorg. Nucl. Chem.
J. Inst. Brewing, London
J. Inst. Chem., Calcutta
J. Inst. Fuel
J. Labelled Comp. Radiopharm.
J. Less-Common Met.
J. Lipid Res.
J. Liq. Chromatogr.
J. Lumin.
J. Macromol. Sci., Chem.
J. Macromol. Sci., Phys.
J. Magn. Reson.
J. Med. Chem.
J. Mol. Biol.
J. Mol. Catal.
J. Mol. Spectrosc.
J. Mol. Struct.
J. Neurochem.
J. Nonmet. Semiconduct.
J. Oil Colour Chem. Assoc.
J. Organomet. Chem.
J. Org. Chem.
J. Org. Chem. USSR (Engl. Transl.)
J. Pharmacol.
J. Pharmacol. Exp. Ther.
J. Pharm. Pharmacol.
J. Pharm. Sci.
J. Photochem.
J. Phys. Chem.
J. Phys. Chem. Ref. Data
J. Phys. Chem. Solids
J. Phys. E
J. Polym. Sci., Macromol. Rev.
J. Polym. Sci., Polym. Chem. Ed.
J. Polym. Sci., Polym. Phys. Ed.
J. Polym. Sci., Polym. Symp.

J. Prakt. Chem.
J. Quant. Spectrosc. Radiat. Transfer
J. Radioanal. Chem.
J. Raman Spectrosc.
J. Res. Inst. Catal., Hokkaido Univ.
J. Res. Nat. Bur. Stand., Sect. A
J. Sci. Food Agric.
J. Sci. Hiroshima Univ., Ser. A II, Phys., Chem.
J. Sci. Ind. Res.
J. Soc. Dyers Colour.
J. Soc. Leather Technol. Chem.
J. Solid State Chem.
J. Solution Chem.
J. Steroid Biochem.
J. Struct. Chem. (Engl. Transl.)
J. Text. Inst.
J. Therm. Anal.
Justus Liebigs Ann. Chem.

Kagaku Kogaku
Kanazawa Daigaku Yakugakubu Kenkyu Nempo
Kem. -Kemi
Kem. Tidskr.
Khim. Geterotsikl. Soedin.
Khim. Ind. (Sofia)
Khim. Neft. Mashinostr.
Khim. Prir. Soedin.
Khim. Prom. (Moscow)
Khim. Volokna
Khim. Vys. Energ.
Kinet. Catal. (Engl. Transl.)
Kinet. Katal.
Kjemi
Kobunshi Kagaku
Kogyo Kagaku Zasshi
Kolloidn. Zh.
Koord. Khim.
Kristallografiya
Kunstst. -Plast. (Solothurn, Switz.)

Lab. Pract.
Latv. PSR Zinat. Vestis, Kim. Ser.
Lipids

Macromolecules
Macromol. Synth.
Magy. Kem. Foly.
Magy. Kem. Lapja
Makromol. Chem.
Manuf. Chem. Aerosol News
Meded. Vlaam. Chem. Ver.
Mekh. Polim.
Mem. Fac. Sci. Kyushu Univ., Ser. C
Mem. Inst. Protein Res., Osaka Univ.
Mem. Inst. Sci. Ind. Res., Osaka Univ.
Mendeleev Chem. J. (Engl. Transl.)
Methods Biochem. Anal.
Methods Free-Radical Chem.
Microchem. J.
Mikrochim. Acta
Mol. Cell. Biochem.
Mol. Cryst. Liq. Cryst.
Mol. Phys.
Monatsh. Chem.

Nahrung
Nature (London)
Naturwissenschaften
Neftekhimiya
Nippon Kagaku Kaishi
Nippon Nogei Kagaku Kaishi
Nouv. J. Chim.

Oesterr. Chem. -Ztg.
Online (Weston, Conn.)
Orbital
Org. Magn. Reson.
Org. Mass Spectrom.
Org. Prep. Proced. Int.
Org. React.
Org. React. (USSR)
Org. React. Mech.
Org. Synth.

Paint Manuf.
Pak. J. Sci.
Pak. J. Sci. Ind. Res.
Pak. J. Sci. Res.
Periodia Polytech., Chem. Eng.
Pestic. Sci.
Philos. Mag.
Philos. Trans. R. Soc. London, Ser. A
Phosphorus Sulfur

Photochem. Photobiol.
Phys. Chem. Glasses
Phys. Rev.
Phys. Rev. Lett.
Phys. Scr.
Phytochemistry
Pigm. Resin Technol.
Pis'ma Zh. Eksp. Teor. Fiz.
Plast. Polym.
Pol. J. Chem.
Polym. Age
Polymer
Polym. Sci. USSR (Engl. Transl.)
Postepy Biochem.
Prikl. Biokhim. Mikrobiol.
Priroda (Moscow)
Proc. Am. Soc. Brew. Chem.
Proc. Anal. Div. Chem. Soc.
Process Biochem.
Processing
Proc. Indian Acad. Sci., Sect. A
Proc. Indian Acad. Sci., Sect. B
Proc., K. Ned. Akad. Wet., Ser B
Proc., K. Ned. Akad. Wet., Ser C
Proc. Natl. Acad. Sci., India, Sect. A
Proc. Natl. Acad. Sci. USA
Proc. R. Soc. Edinburgh, Ser. A
Proc. R. Soc. London, Ser. A
Proc. R. Soc. London, Ser. B
Proc. Soc. Exp. Biol. Med.
Prog. Bioorg. Chem.
Prog. Colloid Polym. Sci.
Prog. Inorg. Chem.
Prog. Med. Chem.
Prog. Nucleic Acid Res. Mol. Biol.
Prog. Nucl. Magn. Reson. Spectrosc.
Prog. Phys. Org. Chem.
Prog. React. Kinet.
Prog. Solid State Chem.
Prog. Stereochem.
Prog. Surf. Membr. Sci.
Prog. Surf. Sci.
Prog. Thin-Layer Chromatogr. Relat. Methods
Przem. Chem.
Pure Appl. Chem.
Pyrethrum Post

Quad. Ing. Chim. Ital.
Quim. Nova

Radiat. Phys. Chem.
Radiat. Res.
Radiochim. Acta
Radiokhimiya
React. Kinet. Catal. Lett.
Recent Dev. Chem. Nat. Carbon Compd.
Recent Prog. Horm. Res.
Recherches
Recl. Trav. Chim. Pays-Bas
Rend. Accad. Sci. Fis. Mat., Naples
Rep. Prog. Appl. Chem.
Residue Rev.
Rev. Anal. Chem.
Rev. Asoc. Bioquim. Argent.
Rev. Chim. (Bucharest)
Rev. Phys. Chem. Jpn.
Rev. Port. Quim.
Rev. Roum. Biochim.
Rev. Roum. Chim.
Rev. Sci. Instrum.
Rev. Soc. Quim. Mex.
Ric. Sci.
Rubber Chem. Technol.
Russ. Chem. Rev. (Engl. Transl.)
Russ. J. Inorg. Chem. (Engl. Transl.)
Russ. J. Phys. Chem. (Engl. Transl.)

S. Afr. J. Chem.
Sankyo Kenkyusho Nempo
Sb. Ved. Pr., Vys. Sk. Chemickotechnol., Pardubice
Sch. Sci. Rev.
Schweiz. Apoth. -Ztg.
Sci. Cult.
Science
Sci. Pap. Coll. Gen. Educ., Univ. Tokyo
Sci. Pap. Inst. Phys. Chem. Res. (Jpn.)
Sci. Rep. Res. Insts., Tohoku Univ.
Sci. Rep. Tohoku Univ., Ser. 1
Sci. Sinica
Sel. Annu. Rev. Anal. Sci.
Semicond. Insul.
Sep. Purif. Methods
Sep. Sci. Technol.

Soap. Cosmet., Chem. Spec.
Sov. Electrochem. (Engl. Transl.)
Sov. J. Bioorg. Chem. (Engl. Transl.)
Sov. J. Coord. Chem. (Engl. Transl.)
Sov. Phys. -Crystallogr. (Engl. Transl.)
Sov. Radiochem. (Engl. Transl.)
Spectrochim. Acta, Part A
Spectrochim. Acta, Part B
Spectrosc. Lett.
Steroids
Steroids Lipids Res.
Struct. Bonding (Berlin)
Stud. Univ. Babes-Bolyai, Ser. Chem.
Sub-Cell. Biochem.
Surf. Colloid Sci.
Surf. Sci.
Synth. Commun.
Synthesis
Synth. Proced. Nucleic Acid Chem.
Synth. React. Inorg. Metal-Org. Chem.

Tachen Hwahak Hoechi
Talanta
Technol. Rep. Osaka Univ.
Teor. Eksp. Khim.
Teor. Osn. Khim. Tekhnol.
Tetrahedron
Tetrahedron Lett.
Text. Inst. Ind.
Text. Res. J.
Theor. Exp. Chem. (Engl. Transl.)
Thermochim. Acta
Tin Its Uses
Tokyo Kogyo Shikensho Hokoku
Top. Curr. Chem.
Top. Stereochem.
Trans. Inst. Chem. Eng.
Trans. Inst. Met. Finish.
Transition Met. Chem.
Trans. J. Br. Ceram. Soc.
Trends Biochem. Sci.
Tr. Inst. Elektrokhim., Ural. Nauchn. Tsentr. Akad. Nauk SSSR

Ukr. Biokhim. Zh.
Ukr. Khim. Zh. (Russ. Ed.)
Usp. Khim.
UV Spectrom. Group Bull.
Uzb. Khim. Zh.

Vestn. Leningr. Univ., Fiz., Khim.
Vestn. Mosk. Univ., Khim.
Vestn. Slov. Kem. Drus.
Vestsi Akad. Navuk B, SSR. Ser. Khim. Navuk
Veszpremi Vegyip. Egy. Kozl.
Vitam. Horm. (N.Y.)
Vopr. Med. Khim.
Vysokomol. Soedin., Ser. A
Vysokomol. Soedin., Ser. B

Xenobiotica

Yakugaku Zasshi
Yuki Gosei Kagaku Kyokai Shi

Z. Anorg. Allg. Chem.
Zavod. Lab.
Zb. Pr. Chemickotechnol. Fac. SVST
Z. Chem.
Zentralbl. Pharm., Pharmakother. Laboratoriumsdiagn.
Zh. Anal. Khim.
Zh. Eksp. Teor. Fiz.
Zh. Evol. Biokhim. Fiziol.
Zh. Fiz. Khim.
Zh. Nauchn. Prikl. Fotogr. Kinematogr.
Zh. Neorg. Khim.
Zh. Obshch. Khim.
Zh. Org. Khim.
Zh. Prikl. Khim.
Zh. Prikl. Spektrosk.
Zh. Strukt. Khim.
Zh. Vses. Khim. Ova.
Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.
Z. Lebensm. -Unters. Forsch.
Z. Naturforsch., Teil A
Z. Naturforsch., Teil B
Z. Naturforsch., Teil C
Z. Phys. Chem. (Frankfurt am Main)
Z. Phys. Chem. (Leipzig)
Z. Vitam., Horm., Fermentforsch.
Z. Wiss. Photogr., Photophys., Photochem.

NOTICES TO AUTHORS—No. 5/1969

The International System of Units (SI)

Preamble

For many years the practice of The Society in respect of units has been based on the recommendations of a joint Committee of The Royal Society, The Chemical Society, The Faraday Society, and The Physical Society. The 1951 set of recommendations published by that Committee formed the basis of Chapter 7 of the ' Handbook for Chemical Society Authors ' but since their promulgation much effort has been expended in international circles to devise and approve a basic set of coherent units. This having been completed, The Joint Symbols Committee of The Royal Society, of which The Chemical Society is a participating member, has produced a completely new set of recommendations in a pamphlet ' Symbols, Signs and Abbreviations ' 1969 (copies of this pamphlet or further details can be obtained from the Managing Editor, The Chemical Society, Burlington House, London, W1V OBN). The basis of the new recommendations is the ' Système International d'Unités ' (to be abbreviated to SI, in all languages).

The advantages offered by SI are as follows.

(i) It is a truly coherent system, *i.e.* the product or quotient of any two unit quantities in the system is the unit of the resultant quantity. This contrasts with the previous situation where, even in metric systems used within the same discipline, many additional units are arbitrarily and sometimes differently defined.

(ii) SI derives nearly all the quantities needed in all sciences and technologies from a very small set of base-units.

(iii) The variety of multiples and sub-multiples in common use is minimized.

(iv) A more uniform presentation can be ensured.

(v) Presentation is such that the relation of any derived unit, or multiple or sub-multiple of a derived unit, to the coherent unit is always obvious and simple.

Policy

(1) The Society announces its approval and support of SI, and its intention that SI shall become the preferred system in its publications.

(2) *Guidelines for the publications of the Society.* The Society realises that public acceptance of this system will be more a matter of education and tolerance than of dictatorial action. It nevertheless desires that the SI system and units compatible with it shall *rapidly* become the established standard in the Society's publications. An author will not be denied any reasonable usage, but if non-SI units are used for critical data or for quantities measured to a high order of accuracy (as opposed to the rough physical conditions of an experiment), the definitive values will be expressed in SI units as well.

The following will be the guidelines used:

(*a*) A metric system will always be used in preference to a non-metric one.

(*b*) The SI system will be the standard usage.

(*c*) The units used to record the *definitive* values of ' critical data ' or quantities measured to high degree of accuracy will be of the SI system.

(*d*) When non-SI units are used they must be adequately explained unless their definition is obvious (*e.g.* degree Celsius, mmHg, g, h). The derivation of derived non-SI units will be indicated.

(*e*) Equations involving electrical quantities should normally be those appropriate for use with SI (rationalized m.k.s) units. If authors wish to use equations suitable for e.s.u. or e.m.u. the lack of consistency with SI units must be explicitly noted.

(3) *The principal changes.* There are four of these:

(*a*) Basic units: the metre and the kilogramme replace the centimetre and the gramme of the old metric system.

(*b*) The unit of force is now the newton (kg m s^{-2}).

(*c*) The unit of energy is the joule and of power the joule per second (watt); thus the variously defined calories and non-metric units of energy and power are superseded.

(*d*) ' Electrostatic ' and electromagnetic ' units are replaced by SI electrical units.

Detail

(4) *Definition.* A quantity is expressed as the product of a numerical value and a unit.

(5) *The System.* The fully coherent SI consists of base-units, supplementary units, derived units, and decimal multiples and sub-multiples of these units, formed by use of prefixes only.

(6) *Coherent systems.* A coherent system is one based on a selected set of ' base-units ' from which ' derived units ' are obtained by multiplication without introducing numerical factors.

(7) *Base-units.* The name International System of Units (SI) was adopted by the Conférence Générale de Poids et Mesures in 1960 for the coherent system now based on the base-units given in Table 1.

TABLE 1

Physical quantity	*Name of base-unit*	*Symbol for unit*
length	metre	m
mass	kilogramme	kg
time	second	s
electrical current	ampere	A
thermodynamic temperature	kelvin	K
luminous intensity	candela	cd
amount of substance	mole	mol

(8) *Supplementary units.* The SI also includes two ' supplementary ' *dimensionless* units as follows:

Physical quantity	*Name of unit*	*Symbol for unit*
plane angle	radian	rad
solid angle	steradian	sr

(9) *Multiples and sub-multiples.* In the SI there is one and only one basic unit for each physical quantity. Decimal fractions and multiples of these basic units may, however, be constructed by use of certain prefixes (see Table 2). They may also be used with derived SI units.

TABLE 2

Fraction	*Prefix*	*Symbol*	*Multiple*	*Prefix*	*Symbol*
10^{-1}	deci	d	10	deka	da
10^{-2}	centi	c	10^{2}	hecto	h
10^{-3}	milli	m	10^{3}	kilo	k
10^{-6}	micro	μ	10^{6}	mega	M
10^{-9}	nano	n	10^{9}	giga	G
10^{-12}	pico	p	10^{12}	tera	T
10^{-15}	femto	f			
10^{-18}	atto	a			

The combination of a prefix and a unit symbol constitutes a new single unit symbol; compounding of prefixes is not permitted.

Although it will not always be possible, particularly in Tables, the general principle should be to choose a unit (*i.e.* including multiple or sub-multiple) such that the resulting numerical value is between 0·1 and 1000.

(10) *Derived units.* Some derived units have special names and symbols, and these are given in Table 3.

TABLE 3

Physical quantity	*Name of SI unit*	*Symbol for SI unit*	*Definition of SI unit*
energy	joule	J	$kg\ m^2 s^{-2}$
force	newton	N	$kg\ m\ s^{-2} = J\ m^{-1}$
power	watt	W	$kg\ m^2 s^{-3} = J\ s^{-1}$
electric charge	coulomb	C	A s
electric potential difference	volt	V	$kg\ m^2 s^{-3} A^{-1} = JA^{-1} s^{-1}$
electric resistance	ohm	Ω	$kg\ m^2 s^{-3} A^{-2} = VA^{-1}$
electric capacitance	farad	F	$A^2 s^4 kg^{-1} m^{-2} = As\ V^{-1}$
magnetic flux	weber	Wb	$kg\ m^2 s^{-2} A^{-1} = V\ s$
inductance	henry	H	$kg\ m^2 s^{-2} A^{-2} = VA^{-1}\ s$
magnetic flux density	tesla	T	$kg\ s^{-2} A^{-1} = V\ s\ m^{-2}$
luminous flux	lumen	lm	cd sr
illumination	lux	lx	$cd\ sr\ m^{-2}$
frequency	hertz	Hz	s^{-1}

Others do not

Physical quantity	*SI unit*	*Symbol for SI unit*
area	square metre	m^2
volume	cubic metre	m^3
density	kilogramme per cubic metre	$kg\ m^{-3}$
velocity	metre per second	$m\ s^{-1}$
angular velocity	radian per second	$rad\ s^{-1}$
acceleration	metre per second squared	$m\ s^{-2}$
pressure	newton per square metre	$N\ m^{-2}$
kinematic viscosity, diffusion coefficient	square metre per second	$m^2 s^{-1}$
dynamic viscosity	newton second per square metre	$N\ s\ m^{-2}$
electric field strength	volt per metre	Vm^{-1}
magnetic field strength	ampere per metre	$A\ m^{-1}$
luminance	candela per square metre	$cd\ m^{-2}$

(11) *Symbol.* The symbol for a unit will be printed in roman (upright) type, remains unaltered in the plural and does *not* take a full point, *i.e.* 5 cm not 5 cm. or 5 cms or 5 cms.

The symbol will be separated from the numerical value by a thin space.

(12) *Decimal fractions and multiples of SI units having special names.* These names are not part of the SI, but for the time being their use in The Society's publications may continue. The list given in Table 4 is not exhaustive.

TABLE 4

Physical quantity	*Name of unit*	*Symbol unit*	*Definition of unit*
length	ångström	Å	$10^{-10}\ m = 10^{-1}\ nm$
length	micron	μm	$10^{-6}\ m$
area	barn	b	$10^{-28}\ m^2$
volume	litre	l	$10^{-3}\ m^3 = dm^3$
mass	tonne	t	$10^3\ kg = Mg$
force	dyne	dyn	$10^{-5}\ N$
pressure	bar	bar	$10^5\ N\ m^{-2}$
pressure	pascal	Pa	Nm^{-2}
energy	erg	erg	$10^{-7}\ J$
kinematic viscosity diffusion coefficient	stokes	St	$10^{-4}\ m^2 s^{-1}$
dynamic viscosity	poise	P	$10^{-1}\ kg\ m^{-1} s^{-1}$
magnetic flux	maxwell	Mx	$10^{-8}\ Wb$
magnetic flux density (magnetic induction)	gauss	G	$10^{-4}\ T$
conductance	siemens	S	Ω^{-1}

(13) *Units defined in terms of the best available experimental values of certain physical constants.* These units are not part of the SI. The factors for conversion of these units to SI units are subject to change in the light of new experimental measurements of the constants involved. Their use outside the restricted contexts to which they are appropriate should be discouraged. The following list is not exhaustive.

Physical quantity	*Name of unit*	*Symbol for unit*	*Conversion factor*
energy	electronvolt	eV	$eV \approx 1{\cdot}6021 \times 10^{-19}\ J$
mass	unified atomic mass unit	u	$u \approx 1{\cdot}660\,41 \times 10^{-27}\ kg$

(14) *Other units now exactly defined in terms of the SI units.* These units are not part of the SI. It is recognized that their use may be continued for some time but it is recommended that except in special circumstances they should be progressively abandoned in conformity with international recommendations. The list given in Table 5 is by no means exhaustive. Each of the definitions given in the fourth column is *exact*.

TABLE 5

Physical quantity	*Name of unit*	*Symbol for unit*	*Definition of unit*
length	inch	in	$2{\cdot}54 \times 10^{-2}\ m$
mass	pound (avoirdupois)	lb	0·453 592 37 kg
time *	minute	min	60 s
time *	hour	h	3600 s
force	kilogramme-force	kgf	9·806 65 N
force	pound-force	lbf	$9{\cdot}806\,65 \times 0{\cdot}453\,592\,37\ N$
pressure	atmosphere	atm	$101\,325\ N\ m^2$
pressure	conventional millimetre of mercury	mmHg	$13{\cdot}5951 \times 9{\cdot}806\,65\ N\ m^{-2}$
pressure	torr	Torr	$(101\,325/760)\ N\ m^{-2}$
pressure	pound-force per square inch	$lbf\ in^{-2}$	$\frac{9{\cdot}806\,65 \times 4535{\cdot}9237}{6{\cdot}4516}\ N\ m^{-2}$
energy	kilowatt hour	kW h	$3{\cdot}6 \times 10^6\ J$
energy	thermochemical calorie	cal(thermochem.)	4·184 J
energy	I.T. calorie	cal_{IT}	4·1868 J
thermodynamic temperature	degree Rankine	°R	(5/9) K
radioactivity	curie	Ci	$3{\cdot}7 \times 10^{10}\ s^{-1}$

* Use of other common units (min, h, day) may continue in normal expressions of intervals of time.

NOTICE TO AUTHORS—No. 6/1969

Formulae and Figures

The purpose of all illustrative matter in a paper is to clarify the arguments and descriptions rather than to duplicate them. The Society strongly encourages the use of displayed formulae, particularly in the form of schemes where the details of a reaction sequence are often more easily understood when illustrated than when described in the text.

All formulae and figures should be clearly drawn, and in the case of figures provided with captions; the latter should be typed on a separate sheet. Since all formulae carry a key number by which they are identified, unless they form part of the running text or unless they are part of a scheme which itself has a caption, they are not generally further described. Blocks of formulae do not need a caption.

Illustrative matter is divided, for technical reasons, into figures and formulae, although in many cases (*e.g.* crystal structures which may be regarded as formulae but which are treated as figures) these divisions overlap.

Structural Formulae.—(*a*) Only those formulae which are displayed may be given key numbers. In all other cases the compounds concerned are referred to by name only.

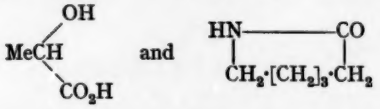
(*b*) Formulae are numbered sequentially with bold arabic numerals in parentheses [(**1**), (**2**), and (**3**) *etc.*] as they are displayed and *not* as they are mentioned in the text.

(*c*) In complex reaction schemes the formulae should be numbered serially following the reaction sequence. Non-sequential numbering in a collection of formulae can render it hard to locate an individual number.

(*d*) Structural or displayed formulae must be carefully and accurately drawn or typed on a separate sheet, rather than inserted into the text, although a marginal indication of where they are to go in the text is desirable.

(*e*) Formulae inserted into the body of the text (as distinct from those displayed separately) should be written on one line if possible, *e.g.*

HO·CHMe·CO_2H and $\overline{NH\cdot[CH_2]_5\cdot CO}$ rather than



(*f*) Points (which may be typed as full stops) are used to indicate bonds between the atoms of the backbone chain of a compound. The symbol of each element of that chain is preceded by a full stop (or colon for a double bond) and followed by the symbols or formulae of the atoms or groups that are attached to it (parentheses being used where necessary to enclose compound groups), *e.g.* *o*-HO·C_6H_4·CH_2·NH_2 and CH_2Cl·CH(OH)·CO_2H.

Groups that are indicated by a single symbol (*e.g.* **Me and Et** *etc.*) do not need use of such full stops.

Repeating sequences of a backbone composite group are enclosed with square brackets and their number is indicated by an inferior multiplier, *e.g.* HO·$[CH_2]_4$·NH_2, but HO·$[CH_2]_4$·N(CH_2·OH)$_2$.

(*g*) The use of large circles to represent six delocalized π-electrons in cyclic systems (with or without positive or negative signs as appropriate) is permitted in certain circumstances. Cyclic systems with more or less than six delocalized π-electrons may be represented by formulae containing dotted lines. Both topics are dealt with in *Proceedings*, 1959, 75.

(*h*) Customary steric conventions must be observed, notably for steroids, triterpenes, and carbohydrates. The Society uses wedges (◢) or heavy lines (—) rather than blocked circles (●) and broken lines in the form – – – – – rather than ıllll.

(*i*) The symbols Me, Et, Pr^n, Pr^i, Bu^n, Bu^i, Bu^s, Bu^t, Ph, Ac, Bz (the symbol for PhCO and not for $PhCH_2$), Alk, Ar, and Hal, should be used but may be written in full when the groups are involved in the reaction described. Other special symbols, if used, require an explanatory footnote. The carboxy-group is written CO_2H (*not* COOH) and similarly CO_2R.

(*j*) One variable univalent substituent is indicated by R; when more than one independently variable general substituent is present, R^1, R^2, and R^3 should be used (*not* R, R^1, R^2, R^3; or R_1, R_3, and R_3 which indicate 1 × R and multiples of R thereof).

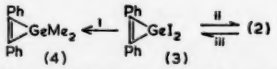
(*k*) Often it is desirable to use one formula to represent a number of related compounds (or classes of compounds) by the use of one or more independently variable substituents. It is preferable to give each compound thus represented a separate key number rather than to subdivide individual key numbers by alphabetical suffixes [*i.e.* (1a), (1b), (1c) *etc.*].

(**1**) R^1 = R^3 = Ph, R^3 = Me, X = O
(**2**) R^1 = Me, R^3 = R^3 = Ph, X = S

(**3**) R^1 = Me, R^3 = Ph, R^3 = Bz
(**4**) R^1R^3 = CO·O·CO, R^3 = Ph

The use of more than four independently variable substituents or atoms on one generalized formula is discouraged.

(l) Once a formula has been displayed it is permissible to employ its key number in later reaction schemes or equations rather than to re-display the formula:



Reagents: i, MeMgI; ii, NaOH; iii, HI

It should be noted that reagents and reaction conditions are given as footnotes to the scheme for economy of space; if present, an equation number is set as far to the right as possible, and if there is likelihood of

confusion with compound key-numbers it is accompanied by the word equation.

(*m*) Displayed formulae, unless they are capable of being typed on one line [see point (*e*) above], should not be included in tables; they should be displayed before the table with a key number for each compound and this should be used in the table.

(*n*) The key number for a compound may be used in the cursive text to avoid repetition of long chemical names; this device must not be used to excess. In general it is preferred if the key number is qualified by a partial name for the compound as in the following example:

'Pyolin (**1**) was oxidized by permanganate to the oxo-acid (**2**), the methyl ester (**3**) of which with methylmagnesium iodide gave the normal product (**4**)'.

(*o*) Reference to compounds in the Summary by key number alone is not allowed since a summary should be comprehensible without reference to the body of the paper itself. The reference number should, however, accompany the name of the compound to which it refers.

Figures.—(*a*) Figures must bear on the back the names of the authors, the title of the paper (abbreviated if necessary), and the number of the figure.

(*b*) Figures must be in Indian ink, on Bristol board, white smooth cartridge paper, tracing linen, plastic film (it is essential that the special plastic ink developed for this is used), or graph paper with *faint* blue lines (red or brown lines must not be present as these may be reproduced by the photographic process of block making). Since lines must be black and sharp, photostats or similar prints are often not suitable. If paper is used, it must be strong enough to withstand repeated handling.

(*c*) Lettering and numerals must be in *blue pencil* (*not* red or black pencil or ink) clearly legible but not so heavily scored as to make a permanent impression on the paper or board.

(*d*) When the figures are large (more than 8 in × 10 in), smaller copies (which may be rough, as long as they are clear) should be supplied for submission to the referees; editing will not be undertaken, however, before the final figures are received.

(*e*) Figures must be carefully drawn, preferably three times the size (linear) that seems necessary to ensure sharp printing, but excessive reduction is costly and illustrations that exceed five times the size of the finished block may be returned to the author for redrawing.

(*f*) Two-inch margins are essential all round figures. Lettering for insertion at margins should be placed well clear of the ordinate or abscissa line so that it can be copied before erasure.

Lettering and touching-up are done by the Society and clarity of instructions is essential. When there is much lettering, or complicated lettering, and always when tracing linen or plastic film is used, a rough tracing should be added with the lettering shown in ink.

(*g*) Since, for printing, the size is reduced, lines should not be too thin. Given lines must be of even thickness, angles neat, and curves smooth.

(*h*) Graphs should have only the requisite minimum of the scale (not less than three points) marked by numerals, and the scale lines should not normally be continued into the body of the figure.

(*i*) Graphs in any one paper should, when convenient, be drawn to the same scale, and scale markings should, when possible, be identical so that the graphs may be placed adjacent on the page. Contrariwise, two curves drawn to different scales can be shown on one graph by having the appropriate scales on the left-hand and the right-hand side. The use of both right- and left-hand axes and top and bottom axes on figures which have quantitative significance is encouraged.

(*j*) Experimental points must be shown sufficiently large to be distinguishable when reduced in size. Whenever possible, they should be confined to open and closed circles, crosses, squares, and triangles. Partly black circles and similar signs frequently become indistinguishable in print.

(*k*) Curves may be distinguished as full lines (——), broken (– – – –) or dotted lines (· · · ·), and dot-dash lines (— · — · —); further differentiation should normally be achieved by labelling the curves, which is, in any case, desirable.

(*l*) For reference in legends, it is preferable to mark curves A, B, C, *etc.* rather than to reproduce the type of line in print.

(*m*) There must be no unnecessary waste space, *e.g.* around curves; ordinates and abscissae should start at zero only if the curve extends to that range. Enlargement of parts of a figure can occasionally be placed in a corner of the complete figure.

(*n*) It is not advisable to insert much or complicated lettering on curves or in blank spaces; mistakes (in copying by the artist) can rarely be rectified once the block is made. It is better to label the curves A, B, C, *etc.* and to use explanatory legends.

(*o*) *Large* solid objects should be represented by hatching rather than by black surfaces, otherwise the ink may smear on printing.

(*p*) Photographs are reproduced by a half-tone process on art paper. The prints supplied must be very clear and of good contrast, as considerable definition may be lost in reproduction.

(*q*) Captions and explanatory legends, to be set by the printer should be typed on a separate page attached to the manuscript, and not given on the figure itself.

(*r*) Figures are numbered consecutively Figure 1, Figure 2, *etc.* (in arabic numerals). Photographs (half-tone reproduction) are numbered consecutively Plate 1, Plate 2, *etc.* but these numbers are independent of the numbering of any figures.

(*s*) Since figures represent an uneconomical use of space their number and size should be kept to a minimum. Figures and tables for the same values are discouraged.

NOTICES TO AUTHORS—No. 7/1970 (revised 1976)

Deposition of Data—Supplementary Publications Scheme

Preamble

The growing volume of research that produces large quantities of data, the increasing facilities for analysing such data mechanically, and the rising cost of printing are all making it very difficult to publish in the *Journal* in the normal way the full details of the experimental data which become available. Moreover, whilst there is a large audience for the general method and conclusions of a research project, the number of scientists interested in the details, and in particular in the data, of any particular case may be quite small. The British Library, Lending Division (B.L.L.D.) in consultation with the Editors of scientific journals, has now developed a scheme whereby such data and detail may be stored and then copies made available on request at the B.L.L.D., Boston Spa. The Chemical Society is a sponsor of this scheme and has indicated to the B.L.L.D. its wish to use the facilities being made available in this ' Supplementary Publications Scheme '.

Bulk information (such as crystallographic structure factor tables, computer programmes and output, evidence for amino-acid sequences, spectra, *etc.*), which accompanies papers published in future issues of the Chemical Society's *Journal* may in future be deposited, free of charge, with the Supplementary Publications Scheme, either at the request of the author and with the approval of the referees or on the recommendation of referees and with the approval of the author.

The Scheme

Under this scheme, authors will submit articles and the supplementary material to the *Journal* simultaneously in the normal way, and both will be refereed. If the paper is accepted for publication the supplementary material will be sent by the Society to the B.L.L.D. where it will be stored. Copies will be obtainable by individuals both in the U.K. and abroad on quoting a supplementary publication number that will appear in the parent article.

Preparation of Material

Authors will be responsible for the preparation of camera-ready copy according to the following specifications (although the Society will be prepared to help in case of difficulty).

(*a*) Optimum page size for text or tables in typescript: up to 30 cm × 21 cm.
(*b*) Limiting page size for text or tables in typescript: 33 cm × 24 cm.
(*c*) Limiting size for diagrams, graphs, spectra, *etc.*: 39 cm × 28.5 cm.
(*d*) Tabular matter should be headed descriptively on the first page, with column headings recurring on each page.
(*e*) Pages should be clearly numbered.

It is recommended that all material which is to be deposited should be accompanied by some prefatory text. Normally this will be the summary from the parent paper and authors will greatly aid the deposition of the material if a duplicate copy of the summary is provided. If authors have the facilities available the use of a type face designed to be read by computers is encouraged.

Deposition

The Society will be responsible for the deposition of the material with the B.L.L.D. The B.L.L.D. will not receive material direct from authors since the Library wishes to ensure that the material has been properly and adequately refereed.

Action by the Society

The Society will receive a manuscript for publication together with any supplementary material for deposition and will circulate all of this to referees in the normal way. When the edited manuscript is sent to the printers the supplementary material will be sent for deposition to the B.L.L.D. The Society will add to the paper a footnote indicating what material has been deposited in the Supplementary Publications Scheme, the supplementary publication number, and details as to how copies may be obtained.

Availability

Copies of Supplementary Publications may be obtained from the B.L.L.D. on demand by organizations which are registered borrowers. They should use the normal forms and coupons for such requests addressing them as follows:

Mr. J. P. Chillag,
British Library Lending Division,
Boston Spa,
Wetherby,
West Yorkshire, LS23 7BQ, U.K.

Non-registered users may also obtain copies of Supplementary Publications but should first apply for price quotations. These are available from the Loans Office at the above address.

International Collaboration

A similar scheme (known as the National Auxiliary Publications Service) is being operated in the U.S.A. by the American Society for Information Science. Similar schemes are also being contemplated in other countries. The provision of reciprocal arrangements for the exchange of supplementary data between the various national deposition centres is being investigated.

NOTICES TO AUTHORS—No. 8/1970

X-Ray Crystallographic Structure Factor Tables

The Society has recently taken advice from the members of its Chemical Crystallography Group and as a result of this and of the inception of the National Lending Library Supplementary Publications Scheme (discussed in Notices to Authors No. 7) the following rules are being taken into use forthwith to govern the publication or deposition of *X*-ray crystallographic structure factor tables.

(i) The Society will no longer publish tables of structure factors in its publications except in accordance with the provision of paragraph (iv) below.

(ii) All authors of crystallography papers will submit along with the manuscript a readable table of such structure factors for the referees' inspection. The table should be prepared in accordance with the detail given in paragraph 3 of Notices to Authors No. 7 so that it may be used for deposition. Computer printout may be used providing that it is top copy in good contrast (see note).

(iii) If the referees accept the paper and its associated structure factor tables then the Society will deposit these structure factor tables in the National Lending Library Supplementary Publications Scheme (see Notices to Authors No. 7) and will publish as a footnote to the paper the necessary details that will enable any reader to obtain a copy in microfiche or an electrophotographic printoff of the data tables associated with the paper.

(iv) Authors, or the referees, may request publication of such tables of structure factors, *in extenso*, in cases that seem to them to be desirable. It is expected that this will occur only rarely.

(v) The details of the National Lending Library Supplementary Publications Scheme and the methods for obtaining photographic printoff of material deposited with that scheme are given in Notices to Authors No. 7.

Note to paragraph (ii). Structure factors tables prepared from computer printout must be presented in the form indicated in paragraph 3 of Notices to Authors No. 7 and must be arranged with the greatest economy of space possible [*i.e.* not less than two groups of columns (h, k, l, F_c, F_o) to the page (30 cm × 21 cm)]. All columns must be headed. A ' paste-up ' on white card of computer printout will be acceptable providing the quality of the printout is adequate.

NCTICE TO AUTHORS—No. 9/1974

Nomenclature

For many years the Society has actively encouraged the use of standard I.U.P.A.C. nomenclature and symbolism in its publications as an aid to the accurate and unambiguous communication of chemical information between authors and readers. Although the I.U.P.A.C. rules for naming organic compounds have now gained wide acceptance amongst chemists, mainly because they have been in existence for a number of years, those for naming inorganic compounds are of more recent origin and for this reason their acceptance is less general.

In order to encourage authors to use I.U.P.A.C. nomenclature rules when drafting papers, attention is drawn to the following publications in which both the rules themselves and guidance on their use are given.

'Nomenclature of Organic Chemistry, Sections A, B, and C,' Butterworths, London, 2nd Edition, 1971.

'Nomenclature of Inorganic Chemistry,' Butterworths, London, 1971.

'Manual of Symbols and Terminology for Physicochemical Quantities and Units,' Butterworths, London, 1970.

In addition to the above publications, provisional rules for the naming of organometallic compounds, amino-acids, carbohydrates, carotenoids, and steroids, and rules of stereochemistry are available from the:

I.U.P.A.C. Secretariat,
Bank Court Chambers,
2—3 Pound Way,
Cowley Centre,
OXFORD OX4 3YF.

It is recommended that where there are no I.U.P.A.C. rules for the naming of particular compounds or authors find difficulty in applying the existing rules, they should seek the advice of the Society's editorial staff.

NOTICE TO AUTHORS—No. 10/1976

Authentication of New Compounds

(1) It is the responsibility of authors to provide fully convincing evidence for the homogeneity and identity of all compounds they claim as new. Evidence of both purity and identity is required to establish that the properties and constants reported are those of the compound with the new structure claimed.

(2) In the context of this Notice a compound is considered as new (*a*) if it has not been prepared before, (*b*) if it has been prepared before but not adequately purified, (*c*) if it has been purified but not adequately characterised, (*d*) if, earlier, it has been assigned an erroneous constitution, or (*e*) if it is a natural product synthesised for the first time. In preliminary communications compounds are often recorded with limited characterising data; in spite of (*c*) above later preparations of such compounds are not considered as new if the properties previously reported are confirmed; the same applies to patents.*

(3) Referees are asked to assess, as a whole, the evidence in support of the homogeneity and structure of all new compounds. No hard and fast rules can be laid down to cover all types of compounds, but the Society's policy remains unchanged in that evidence for the unequivocal identification of new compounds should normally include good elemental analytical data; an accurate mass measurement of a molecular ion does not provide evidence of purity of a compound and must be accompanied by independent evidence of homogeneity. Low-resolution mass spectroscopy must be treated with even more reserve in the absence of firm evidence to distinguish between alternative molecular formulae. Where elemental analytical data are not available, appropriate evidence which is convincing to an expert in the field will be acceptable, but authors should include, for the referees, a brief explanation of the special nature of their problem.

(4) Spectroscopic information necessary to the assignment of structure should normally be given. Just how complete this information should be must depend upon the circumstances; the structure of a compound obtained from an unusual reaction or isolated from a natural source needs much stronger supporting evidence than one derived by a standard reaction from a precursor of undisputed structure. Authors are reminded that full spectroscopic assignments may always be treated as a Supplementary Publication where their importance does not justify their inclusion in the published paper.

(5) Finally, referees are reminded of the need to be exacting in their standards but at the same time flexible in their admission of evidence. It remains the Society's policy to accept work only of high quality and to permit no lowering of present standards.

* New compounds should be indicated by underlining the name (for italics) at its first mention (excluding headings) in the Experimental section only, and by giving analytical results in the form: (Found: C, 63.1; H, 5.4. $C_{13}H_{13}NO_4$ requires C, 63.2; H, 5.3%). If analytical results for compounds which have been adequately described in the literature are to be included, they should be given in the form: (Found: 62.95; H, 5.4. Calc. for $C_{13}H_{13}NO_4$: C, 63.2; H, 5.3%). Analyses are normally quoted to the nearest 0.05%.

NOTICE TO AUTHORS—No. 11/1976

Publication of *X*-Ray Crystallographic Work in the *Journal*

Preamble

At a meeting of the Primary Journals Committee held in October 1975 a sub-committee was set up to consider policy with regard to publication in the *Journal* of both preliminary communications and substantive papers concerned with *X*-ray crystallographic work. This step was taken in the light of correspondence received by the Society which indicated concern by many referees on the problems created by the large number of routine *X*-ray crystallographic studies submitted to the Society as a result of the increasing ease of carrying out such work.

Since the sub-committee's terms of reference were wide it was able to consider both this problem and others relating to publication of *X*-ray crystallographic work in all sections of the *Journal*. Its recommendations which are outlined below fall into two groups: those concerned with preliminary communications and those with full papers. These recommendations have been endorsed by the Primary Journals Committee and now represent the Society's policy with regard to crystallographic work submitted for publication in its primary journals.

Preliminary Communications

(1) Evidence was presented to the sub-committee that a major problem associated with the publication of preliminary reports of crystallographic work in *J.C.S. Chem. Comm.* arose as a result of the non-availability to interested readers of the atomic co-ordinates associated with this work. Although in the normal course of events such data would be expected to appear in the follow-up paper, many cases were cited where the period between publication of the preliminary report and the substantive paper was many years or the full papers never appeared in print. The evidence presented suggested that there was considerable disquiet among crystallographers at this state of affairs. In an attempt to improve this situation and after consultation with the Cambridge Crystallographic Data Centre (C.C.D.C.) the Society has resolved to press authors of preliminary reports of *X*-ray crystallographic work to submit together with their communication certain material for deposition with the Centre.* This material will be checked at the Centre for internal consistency and, afterwards, will be available on request to interested readers. The procedure to be adopted will be as follows:

(i) In addition to the communication and the customary covering letter of justification the authors will be expected to provide a complete list of refined co-ordinates (in the form of computer print-out and NOT a retyped version) and a table of bond distances unless these are given in full in the manuscript. If the complete 'crystal data' (*i.e.* cell dimensions and standard deviations, space group, number Z of formulae units per cell) are not listed in the manuscript these must also be submitted.

It should be emphasised that the co-ordinates submitted for deposition, whilst not necessarily being 'fully' refined, should correspond to the stage of refinement described in the preliminary communication and should be the set for which the R factor is quoted. It follows that all bond distances given in the preliminary communication should correspond, apart from any rounding-off errors, with bond distances which can be calculated from the deposited co-ordinates.

(ii) The communication will be assessed in the customary fashion, the material for deposition also being made available to the referees concerned. If the communication is accepted the Society will forward the material for deposition to the C.C.D.C. A statement will be made in the communication that particular material is available from the Centre on request.

(iii) The C.C.D.C. will acknowledge receipt of the material. When a communication is published the deposited material will be evaluated and included in their files as part of their normal abstracting cycle. The evaluation consists of recalculation of the bond lengths from the author's co-ordinates and comparison of these with the author's values. All data on the Centre's files have to pass this internal consistency test. It will not, however, be possible for the evaluation to be made before the appearance of the preliminary communication in print.

(iv) Finally, where an author plans not to follow-up his preliminary communication with a full paper he will be required to submit, in addition to the material outlined above, a copy of the structure factor table for the work presented for deposition with the British Library, Lending Division. In this way it too will be available to interested readers.

(2) In order to aid the readability of communications it is recommended that each should contain a line drawing of the compound under discussion where appropriate.

* Applies only to compounds containing organic carbon atoms.

Papers in Dalton and Perkin Transactions

The sub-committee considered evidence which indicated that *X*-ray crystallographic papers submitted to the *Journal* were assessed in a less rigorous fashion than those reporting other areas of work. Although the sub-committee felt that this claim was largely unsubstantiated it was agreed that improvement of both assessment procedure and presentation of work was possible. The following recommendations have, therefore, been adopted.

(1) Crystallographic papers will be assessed for their chemical as well as their crystallographic interest.

(2) Unless both specifically requested by the author and recommended by the referees for publication, vibrational parameters will be routinely deposited with the structure factors as a Supplementary Publication. Where vibrational parameters are to be published they should be in the form of U_{ij} with units of Å^2.

Referees are reminded that they may, at their discretion, recommend other material for deposition where in their view its inclusion in the parent paper is not justified by its interest.

(3) Each paper should contain a line drawing of the compound under discussion where appropriate in addition to the usual crystallographic figures.

NOTICE TO AUTHORS—No. 12/1977

Publication of Theoretical and Computational Papers

The Primary Journals Committee has been considering future policy towards the publication of papers with a heavily computational content, particularly where these involve standard methods, such as semi-empirical or *ab initio* calculations of molecular electronic properties using readily available computer programmes. Many such papers report what would be considered 'routine work' in other areas of chemistry, and have often included extensive detail.

A specialist sub-committee formulated a set of proposals which were circulated to a large representative sample of theoretical chemists and met with general acceptance. These, with the comments on them, form the basis of this notice.

The Primary Journals Committee recognises that computational work can play a valuable role in chemistry, and will probably continue to do so on an increasing scale. It accepts the time-honoured principle that the first criterion for publication of a paper by the Society should be the worthiness of the chemical problem considered, rather than the particular techniques employed by the author. For example, the use of a new computing algorithm, or the modification of a programme, would not usually, on its own, provide sufficient justification for publication.

The Primary Journals Committee recommends to authors the following guidelines for the preparation of computational papers, so that the material can be presented concisely and effectively.

(i) Papers should be submitted to the appropriate journal: a paper containing innovations in theory to Faraday Transactions II, one in which the computations are incidental to the chemistry to Perkin, Dalton, or Faraday I Transactions. Papers concerned mainly with computational details are unlikely to be accepted.

(ii) The purpose of the paper and the precise objectives of the calculations performed should be clearly stated: the results obtained should be reported only in so far as they relate to those objectives.

(iii) Many papers use a routine procedure based on a well documented method, be it semi-empirical or *ab initio*. It is then sufficient to name the particular variant, referring to key papers in which the method was developed, to cite the computer programme used, and to indicate *briefly* any modification made by the author. A review of theoretical background would be out of place, but an author should say why he considers the method adequate for his purposes.

(iv) Extensive tabulation of numerical results, such as the magnitudes of atomic orbital coefficients, electron populations, contour maps of molecular orbitals and electron densities, and peripheral material of a similar nature, is normally unnecessary. Lengthy line-by-line discussion of such material is, as a general rule, quite unacceptable. Where an author considers that there is a special need to make such material available to other workers, as with highly accurate computations, for example, then this may be deposited with the British Library as a Supplementary Publication. Such material should be submitted with the main paper, clearly distinguished from it, and referred to in the main text.

Guidelines can never provide sufficient criteria for acceptance or rejection of a paper. Critical assessment of the theoretical methods used in a computation, and of their suitability for the purpose in hand, will continue to be entrusted to specialist referees who must also decide whether the results are new and advance science.

NOMENCLATURE INDEX

Listed here are rules for naming, symbolizing and representing chemical compounds, formulas and data published by IUPAC in recent years. Nomenclature rules are developed by IUPAC Commissions and initially published in provisional form. Comments are sought during the following period, and changes may be incorporated before the rules are approved for publication in definitive form.

ACTIVITIES

Definition of Activities and Related Quantities. Appendix 1 of "Manual of Symbols and Terminology for Physicochemical Quantities and Units", 1979 Edition. Available from Pergamon Press.

AMINO ACIDS AND DERIVATIVES

Nomenclature of Amino Acids (Provisional Nomenclature Appendix No. 46, September 1975)

Symbols for Amino Acid Derivatives and Peptides (*Pure & Appl. Chem.*, Vol. 40, No. 3, 1974, pp. 315-331).

see: proteins & peptides

ANALYTICAL CHEMISTRY

Compendium of Analytical Nomenclature, Definitive Rules 1977. Published as a book by Pergamon Press, Oxford. 1978.

Guide to Trivial Names and Synonyms (for Substances used in Analytical Chemistry) *Pure & Appl. Chem.*, No. 4, 1978, p. 339).

see also: Microchemical Analysis, Spectrochemical Analysis, Chemical Analysis.

ATOMIC ABSORPTION / EMISSION

See: Spectrochemical Analysis.

BIOCHEMISTRY

Recommendations for Measurement and Presentation of Biochemical Equilibrium Data (Provisional Nomenclature Appendix No. 61, July 1977, *Info. Bull.*).

see: Clinical Chemistry, Phosphorus - containing compounds of Biochemical Importance, Nucleic Acids, Proteins, Enzymes, Vitamins, Lipids, Carbohydrates.

BORON COMPOUNDS:

Nomenclature of Inorganic Boron Compounds (*Pure & Appl. Chem.*, Vol. 30, Nos. 3-4, 1972, pp. 681-710).

CALORIMETRY

See: Thermodynamics.

CARBOHYDRATES

Carbohydrates Nomenclature (Tentative Nomenclature Appendix No. 7, September 1970).

CARBON

International cooperation on characterization and terminology of carbon and graphite. (*Pure & Appl. Chem.*, Vol. 51, No. 7, 1979, pp. 1561-1574).

CAROTENOIDS

Nomenclature of Carotenoids (*Pure & Appl. Chem.*, Vol. 41, No. 3, 1975, pp. 405-431).

CATALYSIS

Heterogenous Catalysis—see: Surface Chemistry.

CHEMICAL ANALYSIS

Recommendations for presentation of data on complexiimetric indicators. 1. General (*Pure & Appl. Chem.*, Vol. 51, No. 6, 1979, pp. 1357-1336).

Colorimetric and fluorimetric determination of aldehydes and ketones (*Pure & Appl. Chem.*, Vol. 51, No. 8, 1979, pp. 1803-1814).

Colorimetric and Fluorimetric determination of steroids (*Pure & Appl. Chem.*, Vol. 51, No. 10, 1979, pp. 2157)

Recommendations for Publication of Papers on Precipitation Methods of Gravimetric Analysis (Provisional Nomenclature Appendix No. 69, December 1977, *Info. Bull.*).

Recommended Nomenclature for Automatic Analysis (*Pure & Appl. Chem.*, Vol. 21, No. 4, 1970, pp. 527-531).

See: Spectrochemical Analysis, Electrochemistry (for Electroanalytical Techniques), Microchemical Analysis, Equilibria.

CHROMATOGRAPHY

Recommendations on Nomenclature for Chromatography (*Pure & Appl. Chem.*, Vol. 37, No. 4, 1974, pp. 445-462).

CLINICAL CHEMISTRY

Quantities and Units in Clinical Chemistry (*Pure & Appl. Chem.*, Vol. 51, No. 12, 1979, p. 2451-2480).

List of Quantities in Clinical Chemistry (*Pure & Appl. Chem.*, Vol. 51, No. 12, 1979, p. 2481-2502).

Characteristics and Attributes of Instruments intended for Automated Analysis in Clinical Chemistry (*Info. Bull.*, No. 3, 1978).

Quantities and Units in Clinical Chemistry - Optical Spectroscopy: Part 1 (Theoretical Outline and General Quantities) (*Info. Bull.*, No. 3, 1978).

COLLOIDS

See: Surface Chemistry, Micelles.

CORRINOIDS

Nomenclature of Corrinoids (*Pure & Appl. Chem.*, Vol. 48, No. 4, 1976, pp. 495-502).

CYCLITOLS

Nomenclature of Cyclitols (*Pure & Appl. Chem.*, Vol. 37, Nos. 1-2 1974, pp. 283-297).

NMR DATA

Recommendations for the Presentation of NMR Data for Publication in Chemical Journals—B. Conventions Relating to Spectra from Nuclei Other than Protons (*Pure & Appl. Chem.*, Vol. 45, Nos. 3-4, 1976, pp. 217-219).

Recommendations for the Presentation of NMR Data for Publication in Chemical Journals—A. Conventions Relating to Proton Spectra (*Pure & Appl. Chem.*, Vol. 29, No. 4, 1972, pp. 625-628).

NUCLEAR CHEMISTRY

Radioactive ^{63}Ni in biological research. (*Pure & Appl. Chem.*, Vol. 51, No. 6, 1979, pp. 1375-1389).

Recommendations on Nomenclature for Nuclear Chemistry (Provisional Nomenclature Appendix No. 25, June 1972).

Reference materials for trace analysis by radioanalytical methods. (*Pure & Appl. Chem.*, Vol. 51, No. 5, 1979).

Procedure for measurement of 14-MeV neutron fluxes from accelerators for activation analysis. (*Pure & Appl. Chem.*, Vol. 49, No. 3, 1977).

NUCLEIC ACIDS

Abbreviations and Symbols for Nucleic Acids, Polynucleotides and their Constituents (*Pure & Appl. Chem.*, Vol. 40, No. 3, 1974, pp. 277-290).

ORGANIC CHEMISTRY

Nomenclature of Organic Chemistry (a 550 page hardcover volume, 1979, available from Pergamon Press, Oxford).
Section A: Hydrocarbons.
Section B: Fundamental Heterocyclic Systems.
Section C: Characteristic Groups containing carbon, hydrogen, oxygen, nitrogen, halogen, sulfur, selenium and tellurium.
Section D: Organic Compounds containing elements that are not exclusively carbon, hydrogen, oxygen, nitrogen, halogen, sulfur, selenium and tellurium.
Section E: Stereochemistry
Section F: General Principles for the naming of natural products and related compounds.
Section H: Isotopically modified compounds.

Revision of the extended Hantzsch-Widman System of Nomenclature for Heteromonocycles (*Pure & Appl. Chem.*, Vol. 51, No. 9, 1979, pp. 1995-2003).

Nomenclature of Tetrapyrroles(*Pure & Appl. Chem.*, Vol. 51, No. 11, 1979, pp. 2251-2304).

See: Physical Organic Chemistry.

PH

Recommended Reference Materials for Realization of Physiochemical Properties: Potentiometric Ion Activities (*Pure & Appl. Chem.*, No. 11/12, 1978, p. 1485).

PHOSPHORUS COMPOUNDS

Nomenclature of Phosphorus-containing Compounds of Biochemical Importance. (Provisional Nomenclature Appendix No. 66, December 1977).

PHYSICAL ORGANIC CHEMISTRY

Glossary of terms used in physical organic chemistry. (*Pure & Appl. Chem.*, Vol. 51, No. 8, 1979, pp. 1725-1802).

PHYSICOCHEMICAL QUANTITIES AND UNITS

Manual of Symbols and Terminology for Physicochemical Quantities and Units. (*Pure & Appl. Chem.*, Vol. 51, No. 1. 1979 pp. 1). (Also available as soft-cover booklet from Pergamon Press, Oxford.)

See: pH, Spectrochemical Analysis, Reference Materials.

POLYMERS

Sterochemical definitions and notations relating to polymers. (*Pure & Appl. Chem.*, Vol. 48, No. 3, 1976, pp. 373-385).

List of Standard Abbreviations (Symbols) for Synthetic Polymers and Polymer Materials (*Pure & Appl. Chem.*, Vol. 40, No. 3, 1974, pp. 473-476).

Basic Definitions of Terms Relating to Polymers (*Pure & Appl. Chem.*, Vol. 40, No. 3, 1974, pp. 477-491).

PRESENTATION OF DATA

See: NMR, Raman Spectra, Thermodynamics, Mossbauer Spectra, Electron Spectroscopy, Infrared Spectra, Quantum Chemistry, Micelles, Chromatography, Chemical Analysis, Spectrochemical Analysis, Electrochemistry, Equilibria, Surface Analysis.

PROTEINS & PEPTIDES

Nomenclature of Peptide Hormones (Provisional Nomenclature Appendix No. 48, September 1975).

Abbreviations and Symbols for the Description of Conformation of Polypeptide Chains (*Pure & Appl. Chem.*, Vol. 40, No. 3, 1974, pp. 291-308).

Abbreviated Nomenclature of Synthetic Polypeptides (Polymerized Amino Acids) (*Pure & Appl. Chem.*, Vol. 33, Nos. 2-3, 1973, pp. 437-444).

Nomenclature of Iron-Sulfur Proteins (Provisional Nomenclature Appendix No. 32, August, 1973).

A One-letter Notation for Amino Acid Sequences (*Pure & Appl. Chem.*, Vol. 31, No. 4, 1972, pp. 639-645).

Rules for Naming Synthetic Modifications of Natural Peptides (*Pure & Appl. Chem.*, Vol. 31, No. 4, 1972, pp. 647-653).

QUANTUM CHEMISTRY

Expression of Results in Quantum Chemistry (*Pure & Appl. Chem.*, Vol. 50, 1978, pp. 75-79).

QUINONES

Nomenclature of Quinones with Isoprenoid Side-Chains (*Pure & Appl. Chem.*, Vol. 38, No. 3, 1974, pp. 439-447).

RADIATION

Recommended Names and Symbols for Light and Related Electromagnetic Radiation (Manual of Symbols and Terminology for Physicochemical Quantities and Units, 1979, Section 2.8, Pergamon Press, Oxford).

RAMAN SPECTRA

Recommendations for the Presentation of Raman Spectra for Cataloging and Documentation in Permanent Data Collections (*Pure & Appl. Chem.*, Vol. 36, Nos. 1-2, 1973, 275-278).

REFERENCE MATERIALS

Recommended Reference Materials for the Realization of Physicochemical Properties:
- General Introduction (*Pure & Appl. Chem.*, Vol. 40, 1974, pp. 391).
- Enthalpy (*Pure & Appl. Chem.*, Vol. 40, 1974, pp. 399).
- Optical Rotation (*Pure & Appl. Chem.*, Vol. 40, 1974, pp. 451).
- Surface Tension (*Pure & Appl. Chem.*, Vol. 40, 1974, pp. 457).
- Optical Refraction (*Pure & Appl. Chem.*, Vol. 40, 1974, pp. 463).
- Molecular Weight (*Pure & Appl. Chem.*, Vol. 48, 1976, pp. 241).
- Absorbance and Wavelength (*Pure & Appl. Chem.*, Vol. 49, 1977, pp. 661).
- Pressure-volume-temperature relationships (*Pure & Appl. Chem.*, Vol. 49, 1977, pp. 1437).
- Reflectance (*Pure & Appl. Chem.*, Vol. 50, 1978, pp. 1477).
- Potentiometric ion activities (*Pure & Appl. Chem.*, Vol. 50, 1978, pp. 1485).
- Testing Distillation Columns (*Pure & Appl. Chem.*, Vol. 51, 1979, No. 12).

See: Nuclear Chemistry.

SOLUTION CHEMISTRY

Conditional diffusion coefficients of ions and molecules in solution. An appraisal of the conditions and methods of measurement (*Pure & Appl. Chem.*, Vol. 51, No. 7, pp. 1575-1582, 1979).

Recommendations on the Usage of the Terms "Equivalent" and "Normal" (*Pure & Appl. Chem.*, Vol. 50, 1978, pp. 325-338).

ELECTROCHEMISTRY

Recommended terms, symbols, and definitions for electroanalytical chemistry. (*Pure & Appl. Chem.*, Vol. 51, No. 5, 1979, pp. 1159).

Selectivity coefficients of ion-selective electrodes. (*Pure & Appl. Chem.*, Vol. 51, No. 9, 1979, pp. 1913-1980).

Recommendations for Publishing Manuscripts on Ion-Selective Electrodes (*Info. Bull.* No. 1, 1978, pp. 69-74).

Standard Potential of the Silver-Silver Chloride Electrode (*Pure & Appl. Chem.*, No. 11/12, 1978, p. 1701).

Proposed Nomenclature for Transport Phenomena in Electrolytic Systems (Provisional Nomenclature Appendix No. 59, July 1977).

Electrode Reaction Orders, Transfer Coefficients and Rate Constants—Amplification of Definitions and Recommendations for Publication of Parameters (Provisional Nomenclature Appendix No. 60, July 1977).

Classification and Nomenclature of Electroanalytical Techniques (*Pure & Appl. Chem.*, Vol. 45, No. 2, 1976, pp. 81-97).

Status of Faraday Constant as an Analytical Standard (*Pure & Appl. Chem.*, vol. 45, No. 2, 1976, pp. 125-130).

Recommendations for Sign Conventions and Plotting of Electrochemical Data (*Pure & Appl. Chem.*, Vol. 45, No. 2, 1976, pp. 131-134).

Recommendations for Nomenclature of Ion-Selective Electrodes (*Pure & Appl. Chem.*, Vol. 48, No. 1, 1976, pp. 127-132).

Electrochemical Nomenclature (*Pure & Appl. Chem.*, Vol. 37, No. 4, 1974, pp. 499-516).

ELECTRON SPECTROSCOPY

Nomenclature and Spectral Presentation in Electron Spectroscopy Resulting from Excitation by Photons (*Pure & Appl. Chem.*, Vol. 45, Nos. 3-4, 1976, pp. 221-224).

ELEMENTS

Recommendations for the Name of Elements of Atomic Numbers Greater than 100 (*Pure & Appl. Chem.*, Vol. 51, No. 2, 1979, pp. 381).

Atomic Weights of the Elements, 1977 (*Pure & Appl. Chem.*, Vol. 51., No. 2, 1979).

ENZYMES

Nomenclature of Multiple Forms of Enzymes (Provisional Nomenclature Appendix No. 68, December 1977).

Enzyme Nomenclature (Book, 443, pages; casebound and soft-cover editions Elsevier, POB, 1270, Amsterdam, Netherlands).

EQUILIBRIA

Recommendations for presentation of data on compleximetric indicators 1. General. (*Pure & Appl. Chem.*, Vol. 51, No. 6, 1979, pp. 1357-1366).

Proposed Symbols for Metal Complex Mixed Ligand Equilibria (*Info. Bull.*, No. 3, 1978).

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Selected definitions, terminology and symbols for rheological properties. (Manual of Symbols and terminology for physicochemical quantities and units. Appendix II.) (*Pure & Appl. Chem.*, Vol. 51, No. 5, 1979, pp. 1213).

FOOD

A survey of methods for the determination of non-volatile nitrosamines in food. (*Pure & Appl. Chem.*, Vol. 51, No. 6, 1979 pp. 1367-1374).

See: Lipids, Carbohydrates, Amino Acids.

INFRARED SPECTRA

Recommendations for the Presentation of Infrared Absorption Spectra in Data Collections—A. Condensed Phases (*Pure & Appl. Chem.*, 50, 1978, pp. 231-236).

Recommendations for the presentation of Infrared Absorption Spectra in Data Collections (Provisional Nomenclature Appendix No. 50, September 1976).

See: Molecular Force Constants.

INORGANIC CHEMISTRY

Nomenclature of Inorganic Chemistry—Isotopically modified compounds. (*Pure & Appl. Chem.*, Vol. 51, No. 9 (1979) pp. 1981-1994).

Nomenclature of Inorganic Chemistry (*Pure & Appl. Chem.*, Vol. 28, No. 1 1971, pp. 1-110). Also published as a book popularly known as the "Red Book" by Pergamon Press, Oxford.

See: Nitrogen, Carbon, Solution Chemistry, Atomic Weights, Boron Compounds, Equilibria.

INSECTICIDES

Definitions and guidelines for describing and evaluating pesticide residues. (*Pure & Appl. Chem.*, Vol. 51, No. 3, 1979, pp. 677).

Toxaphene (camphechlor). A spectral report. (*Pure & Appl. Chem.*, Vol. 51, No. 7, 1979, pp. 1583-1602).

Status report on Clean-up and determination procedures. (*Pure & Appl. Chem.*, Vol. 51, No. 7, 1979, pp. 1603-1615).

Recommended methods for the determination of residues of pyrethrins and piperonyl butoxide. (*Pure & Appl. Chem.*, Vol. 51, No. 7, 1979, pp. 1615-1623).

ION EXCHANGE

Recommendations on Ion Exchange Nomenclature (*Pure & Appl. Chem.*, Vol. 29, No. 4, 1972, pp. 617-624).

LIPIDS

Nomenclature of Lipids (Provisional Nomenclature Appendix No. 67, December, 1977).

LIQUID-LIQUID DISTRIBUTION

Proposed Terminology and Symbol for the Transfer of Solutes from One Solvent to Another (*Pure & Appl. Chem.*, No. 6, 1978, p. 587).

Recommended Nomenclature for Liquid Liquid Distribution (Solvent Extraction): revised 1975 (Provisional Nomenclature Appendix No. 63, July 1977).

MACROMOLECULES

See: Polymers, Proteins.

MASS SPECTROMETRY

Recommendations for Symbolism and Nomenclature for Mass Spectroscopy (*Pure & Appl. Chem.*, 50, 1978, pp. 65-73).

Recommendations for Nomenclature of Mass Spectrometry (*Pure & Appl. Chem.*, Vol. 37, No. 4, 1974, pp. 469-480).

MICELLES

Reporting experimental data dealing with critical micellization concentrations (c.m.c's) of aqueous surfactant systems. (*Pure & Appl. Chem.*, Vol. 51, No. 5. 1979, pp. 1083).

MICROCHEMICAL ANALYSIS

Terminology for Scales of Working in Microchemical Analysis (*Pure & Appl. Chem.*, Vol. 51, No. 1, 1979 p. 43).

General Aspects of Trace Analytical Methods.
II. Standard Reference Materials for Trace Analysis (*Pure & Appl. Chem.*, No. 11/12, 1978, pp. 1531-1700).
III. Contamination in Trace Analysis (*Pure & Appl. Chem.*, No. 11/12, 1978, p. 1519).

Recommendations on Nomenclature of Scales of Working in Analysis (Provisional Nomenclature Appendix No. 18, February 1972).

MOLECULAR FORCE CONSTANTS

Definition and Symbolism of Molecular Force Constants (*Pure & Appl. Chem.*, No. 11/12, 1978, p. 1707).

MOSSBAUER SPECTRA

Nomenclature and Conventions for Reporting Mossbauer Spectroscopic Data (*Pure & Appl. Chem.*, Vol. 45, Nos. 3-4, 1976, pp. 211-216).

NITROGEN

Nomenclature of Hydrides of Nitrogen and Derived Cations, Anions and Ligands (*Info. Bull.*, No. 2, 1978).

Recommendations on Nomenclature for Contamination Phenomena in Precipitation from Aqueous Solutions (*Pure & Appl. Chem.*, Vol. 37, No. 4, 1974, pp. 463-468).

See: Liquid-Liquid distribution
Electrochemistry (For Transport Phenomena).

SOLVENT EXTRACTION

See: Liquid-Liquid Distribution.

SPECTROCHEMICAL ANALYSIS

Recommendations for Publication of Papers on Methods of Molecular Absorption Spectrophotometry in Solution between 200 and 800 nm (*Pure & Appl. Chem.*, Vol. 50, 1978, pp. 237-242).

Recommended Reference Materials for Realization of Physiochemical Properties; Reflectance (*Pure & Appl. Chem.*, No. 11/12, 1978, p. 1477).

Nomenclature, Symbols, Units and Their Usage in Spectrochemical analysis—IV. X-Ray Emission Spectroscopy (Provisional Nomenclature Appendix No. 54, December, 1976).

Nomenclature, Symbols, Units and Their Usage in Spectrochemical Analysis—II. Data Interpretation (*Pure & Appl. Chem.*, Vol. 45, No. 2, 1976, pp. 99-103).

Nomenclature, Symbols, Units and Their Usage in Spectrochemical Analysis—III. Analytical Flame Spectroscopy and Associated Non-Flame Procedures (*Pure & Appl. Chem.*, Vol. 45, No. 2, 1976, pp. 105-123).

Nomenclature, Symbols, Units and Their Usage in Spectrochemical Analysis—1. General Atomic Emission Spectroscopy (*Pure & Appl. Chem.*, Vol. 30, Nos. 3-4, 1972, pp. 651-679).

See: Infrared Spectra, Mass Spectrometry, Electron Spectroscopy, Raman Spectra, NMR, Reference materials, Chemical Analysis.

STEROIDS

Nomenclature of Steroids (*Pure & Appl. Chem.*, Vol. 31, Nos. 1-2, 1972 pp. 283-322).

See: Chemical Analysis

SURFACE CHEMISTRY

General aspects of trace analytical methods—IV. Recommendations for nomenclature, standard procedures and reporting of experimental data for surface analysis techniques (*Pure & Appl. Chem.*, Vol. 51, No. 11, 1979, pp. 2243-2250).

Definitions, Terminology and Symbols in Colloid and Surface Chemistry—II. Heterogenous Catalysis (*Pure & Appl. Chem.*, Vol. 46, No. 1, 1976, pp. 71-90).

Definitions, Terminology and Symbols in Colloid and Surface Chemistry—I. (*Pure & Appl. Chem.*, Vol. 31, No. 4, 1972, pp. 577-638).

THERMODYNAMICS

Recommendations for Nomenclature of Thermal Analysis—II. DTA and TG Apparatus and Technique, III. DTA and TG Curves (Provisional Nomenclature Appendix No. 64, July, 1977).

Recommendations for Nomenclature of Thermal Analysis (*Pure & Appl. Chem.*, Vol. 37, No. 4, 1974, pp. 439-444).

A Guide to Procedures for the Publication of Thermodynamic Data (*Pure & Appl. Chem.*, Vol. 29, No. 1-3, 1972, pp. 395-408).

TOCOPHEROLS

Nomenclature of Tocopherols and Related Compounds (Provisional Nomenclature Appendix No. 47, September 1975).

VITAMINS

Nomenclature for Vitamin B-6 and Related Compounds (*Pure & Appl. Chem.*, Vol. 33, Nos. 2-3, 1973, pp. 445-452).

X-RAY SPECTROSCOPY

See: Spectrochemical Analysis.

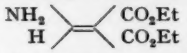
ZEOLITES

Chemical nomenclature and formulation of compositions of synthetic and natural zeolites. (*Pure & Appl. Chem.*, Vol. 51, No. 5, 1979, pp. 1091).

ERRATA

Perkin II Transactions

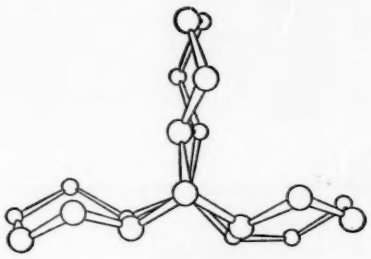
1979, page **1377**, right-hand column, formula (IV) and page **1379**, formula (12a, b): *delete* both formulae and replace by



page **1664**, left-hand column, at foot of article: *insert* ' An analysis based on a similar approach was published recently by Sandstrom (J. Sandstrom, *Tetrahedron Lett.*, **1979**, 639). While we consider first the effect of the substituent on $\pi^*_{C=O}$ (the n_X–$\pi^*_{C=O}$ interaction) and then the resulting change in the n_N–$\pi^*_{C=O}$ interaction in the ground state, Sandstrom chose to look first at the n_N–$\pi^*_{C=O}$ interaction, and its effect on the n_X–$\pi^*_{C=O}$ interaction in the ground and transition states.'

1980, page **523**, authors' names: *delete* Ferina and *insert* Farina.

page **528**, right-hand column: Figure 5, *delete ttt* below right-hand portion of Figure and *insert tt't*; *delete* Figure 6 and replace by:



tc$_c$*c*

page **1041**, right-hand column; line 9, *delete* ' $k_{HO^-} = k'K_w/K_a$ ' and *insert* ' $k_{HO^-} = k'K_a/K_w$ '; line 10, *delete* ' $\beta_{k'} - \beta_{K_a}$ ' and *insert* ' $\beta_{R'} + \beta_{K_a}$ '.

p. **1474**, left-hand column, last seven lines to read as follows: It appears therefore that triphenylstannane, because of its propensity to consume terminal olefins, is an unsuitable reagent for the quantitative determination of the rates of ring opening of simple primary cycloalkylmethyl radicals. The value of the rate constant (k_I *ca.* 6×10^7 s^{-1} at 25 °C) for rearrangement of the cyclopropylmethyl radical (12a), although in satisfactory . . .

p. **1835**, right-hand column, 2 lines from bottom: *transpose* ' Grist and Gold '.

page **1842**, left-hand column: *delete* equation (4) and *insert* ' $2DO + H_2O(g) \underset{K_1}{\rightleftharpoons} 2HO^- + D_2O(g)$ (4) '; line 8, *delete* ' (p_{H_2O}/p_{D_2O}) ' and *insert* ' (p_{D_2O}/p_{H_2O}) '; right-hand column, first line: *delete* ' $(p_{H_2O}/p/p_{D_2O})^4$ ', and *insert* ' $(p_{D_2O}/p_{H_2O})^6$.'

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